INTHEFIELD

Winter
2004–2005
December–
February

The Field Museum's Member Publication



CRC Nearly Complete T. Rex Gigantism

Big Changes Seen and Unseen



JOHN WEINSTEIN /GN88119.6

New roads have been paved, trees have been planted and, finally, the construction fence obscuring the southeast corner of The Field Museum is about to come down. After years of planning, fundraising, building, reorganizing, preparing and excited patience, the Collections Resource Center (CRC) is nearly complete.

From spears to skins to fossil plants, 2 million artifacts and specimens from the anthropology, geology and zoology departments are moving under the terrace for safe keeping. Mobile storage units and cabinets, advanced climate controls and strict safety precautions were installed to guarantee the well-being of these treasures. More than just items on a shelf, each piece is a carefully preserved archive of nature and culture that will soon be more readily accessible to researchers worldwide. Please read pages 2 and 3 to learn more about this landmark facility.

Much less visible is a new wireless infrastructure that will be installed in 2005, poising The Field Museum as the first museum in the United States completely enabled for wireless radio, voice and data services. Many services that are currently limited or nonexistent will become available:

- Quality cell phone service throughout the entire Museum;
- Greatly improved cell phone service to Museum Campus, Lake Shore Drive and the neighboring parkland and harbors, a known "dead zone" despite the area's millions of residents and visitors;
- A radio antenna service that supports our daily operational and security needs and connects to the City of Chicago's emergency services;
- Wireless network (WiFi) service for internal and public applications.

Cell phone access will soon be available throughout the Museum.



JOHN WEINSTEIN/GN90712D

With the opening of *Machu Picchu: Unveiling the Mystery of the Incas* and *Jacqueline Kennedy: The White House Years*, The Field Museum has mounted 56 temporary exhibitions since 1999. It has been our privilege to bring the world to Chicago. Among the most popular have been *Sounds from the Vaults*, *The Dead Sea Scrolls*, *The Endurance: Shackleton's Legendary Antarctic Expedition*, *Kremlin Gold*, *Cleopatra of Egypt*, *Sigmund Freud*, *Chocolate*, *Pearls*, *Eternal Egypt*, *Einstein* and *Splendors of China's Forbidden City*. Through these exhibitions, we have been able to present challenging stories of environmental conservation, cultural expression and individual achievement in a curriculum designed to fulfill our mission of exploring the Earth and its peoples. My knowledge of the world has expanded enormously as I have seen them all, and I hope that you have learned from visiting this wonderful assemblage of exhibitions.

As you plan your year-end contributions, please remember to include The Field Museum. We have enclosed a gift envelope for your convenience. We know you care about our scientific, educational and exhibition work as much as we do, and your contributions assure their continuance.

With gratitude and best wishes in 2005,

John McCarter

John W. McCarter, Jr.
President and CEO

What do you think about In the Field?

For general membership inquiries, including address changes, call 866.312.2781. For questions about the magazine *In the Field*, call 312.665.7115, email acranch@fmnh.org, or write Amy E. Cranch, Editor, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496.

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The Field Museum salutes the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District.



DR. SCOTT DEMEL



JOHN WEINSTEIN/GN89714 2RDC



JILL SEAGARD

2

The CRC is nearly complete, an advanced underground facility dedicated to collections and research.

Top: Kevin Swagel prepares jars of fishes for their move into the CRC.

4

A Field Museum paleontologist coauthors the first research on the lifelong growth pattern for *Tyrannosaurus rex*.

Middle: Sue was 28 when she died 67 million years ago.

16

A Field Museum archaeologist unearths evidence of the slave trade along the Kenyan coast.

Bottom: Rockshelters served as temporary homes or hideouts for residents fleeing slave raiders.

18

The Diversity Project offers free programs and personal contact to underserved families.

The Field Museum

1400 South Lake Shore Drive
Chicago, IL 60605-2496
312.922.9410
www.fieldmuseum.org

Museum Campus Neighbors

Adler Planetarium Experience Stars of the Pharaohs, and take a virtual 3-D trip back in time to when Egypt was the most advanced and powerful civilization on Earth. Discover the birth of the 365-day calendar, the cycle of the four seasons and fascinating mythology on the night sky in a journey as dazzling as Egypt's treasures. Ancient temples, pyramids and cities are recreated on a 360-degree, 9,500-square-foot screen in the Adler's StarRider Theater. For more information on this or other current shows, visit www.adlerplanetarium.org or call 312.922.STAR.

Shedd Aquarium The king is back—King Neptune, that is, at Neptune's Holiday Kingdom. Enjoy crafts, games and more in a festive underwater wonderland, Dec. 18 to Jan. 2. While you're at it, don't let your chance to visit the exhibition Sea Star Quest get away. Meet more than 100 sea stars and other echinoderms, and find out how cool spineless, brainless animals can be. Sea stars aren't fast on their little tube feet, but they'll be moving out Jan. 9. For more information, visit www.sheddaquarium.org or call 312.939.2438.

CRC—Keeper of Treasures, Conveyor of Knowledge



Amy E. Crandt, Editor

Let the drum roll begin. The long-awaited Collections Resource Center (CRC) is nearly complete, a 170,000-square-foot facility built underground to preserve The Field Museum's national landmark status. Coincidentally, the 9-foot-tall tanning drums used to soften the skins of large mammals were the first items moved into the CRC, signaling the start of the proverbial march that nearly 2 million artifacts and specimens will take to their new home.

Left: Tanning drums being lowered into the CRC through an explosion vent.

Our collections—the third largest among U.S. natural history museums at 22 million items—help researchers understand life on Earth. Yet their average annual growth rate of 5 percent has created overflow in some areas. In addition, humidity and temperature fluctuations, pests, dust and other risks associated with a building as old and big as ours were threatening their stability. The CRC ensures that the Museum is carrying out its role as the keeper of treasures and conveyor of knowledge. Even the smallest specimen is a reservoir of data waiting to be tapped.

When the CRC is finished in 2005, 50 percent of the anthropology, geology and zoology collections will begin moving in. Key features include:

- Modern storage choices, including 1,111 new cabinets and mobile systems, that will allow for up to three decades of expansion;
- Reintegration of collections currently scattered around the main building;
- An advanced HVAC system that sifts out pollutants and maintains 68 degrees Fahrenheit and 50 percent relative humidity;
- Safety systems such as a spark-proof areas for our wet collections and extensive waterproofing;
- A cryogenic facility to hold our genome collection, believed to be the broadest sampling available of life on Earth;
- Laboratories for processing and studying collections made in the field;
- Offices and workspace for visiting researchers;
- Viewing areas for special tours;
- A landscaped rooftop terrace for programming and special events.

Years of preparation

Long before construction began in 2001, curators, collections managers and other staff determined their storage and equipment needs. "I counted each shelf and drawer, marveling at what we have. I wanted to have a true understanding of what is here," said Scott Demel, PhD, CRC collection project coordinator. He counted 45,000 shelves, trays and drawers, as well as calculated the square and cubic footage of used and unused space—all so that the CRC's space could be reallocated efficiently. To minimize costs, the Museum will be reusing 250 cabinets and 10,000 shelves.

Each department inventoried what would be moving and identified such issues as damage (i.e. breakage or mold) and items that had never been catalogued. Then prep teams began doing whatever was necessary to assure the objects' protected journey to the CRC. This included: "data scrubbing," such as filling in missing data and reconciling multiple written and computer files; cleaning dust off the jars containing zoological specimens; replacing fragile jars and tanks and refilling depleted liquid; freezing specimens to exterminate pests; re-boxing the skeletal collections; testing for poisons that were once used as pesticides; and remounting unstable artifacts with archive-quality materials.

To an outsider, all of this might seem overwhelming. But as Dr. Demel pointed out, "It's not that stressful. We just have to start slowly and do it bit by bit."

Short distance, long haul

Every single object requires a predetermined plan and staff familiar with the collections to handle it. Special circumstances may occur, such as a Native American object that only women can touch, according to tribal custom, or a large glass jar that needs additional padding. The list of items being transported is exhaustive. Consider a 9,000-pound Egyptian sarcophagus lid; thousands of spears, paddles and clubs; 200 mummies; totem poles; dinosaur bones; boxes of meteorites, including one that weighs 500 pounds; fossil vertebrates and hundreds of plaster casts; minerals and hard rocks; 41,747 jars of snakes, 67,341 jars of lizards and 118,783 jars of frogs; vials of insects; and an actual barrel of monkeys. And that's just a glimpse.

The prep teams will soon begin transporting the items on specially designed carts. Modest estimates predict that it will take one to two years to move the geology and zoology collections and three to four years for the anthropology collections. Dr. Demel said with a chuckle, "I estimated that it would take one person 32 years to move every item."

Several routes to the CRC's main entries have been plotted out, some of which weave through the public areas. When you visit next summer, look for move teams in white coats pushing loaded carts. You might see something you'd never otherwise set eyes on.

Beyond a building addition

The move entails more than just shifting items from one shelf to another. For example, the Pacific collections alone now occupy portions of five rooms and are grouped according to object type, such as textiles or shields. The new design will allow us to reorganize them geographically and culturally, changing our way of thinking from what an object is to how it relates to its greater ethnographic context.

Other areas are so crowded that research itself has been hindered. Jenny McElwain, PhD, a paleobotanist studying the effects of global warming throughout geologic history, collected 1,175 pounds (533 kilograms) of fossil plant materials in Greenland last year that have not been unpacked because there's no room to process them. The CRC literally creates the space needed to maximize our research potential, while consolidating our collections under one roof—quite fortunate when other museums are reluctantly resorting to offsite storage.

And as scientific tools become more sophisticated, our collections appreciate in value. Radiocarbon dates for one carbonized seed could shed light on plant domestication around the world. One baseball-sized meteorite could illuminate how our universe was formed. The DNA from one bird specimen thought to be extinct could answer a contentious evolutionary question. One plant specimen could yield a new pharmaceutical.

Preparing for the CRC has reinvigorated our sense of what our collections contain. Recall a move you made. Regardless of the inherit stresses, you still found time to read your grandmother's letters, to put on that long-forgotten shirt, to dust off your favorite Beatles album. Similarly, the Museum's collections have been growing since 1893, and despite our best efforts, some items have been passively neglected for decades. Our scientists are eager to access these rediscovered riches. You never know what one jar of snakes could hold. **TF**



Left: Gordon Ambrosino creates a new mount for an artifact.

Center: Jars containing zoological specimens will be cleaned before moving to the CRC.

Right: Stuart Fox surveys the fossil vertebrates traveling to the CRC.

PHOTOS BY DR. SCOTT DEMEL

T. Rex Gigantism No Longer a Guessing Game

Greg Borzo, Media Manager, Scientific Affairs



Sue gained up to 4.6 pounds per day during a teenage growth spurt and was 28 at the time of death.

Teenagers are known for rapid surges in growth, seeming to edge upwards a few inches overnight. New research published in *Nature* on Aug. 12, 2004, and coauthored by Peter Makovicky, PhD, dinosaur curator at The Field Museum, says that *Tyrannosaurus rex* gained 4.6 pounds (2.1 kilograms) a day from about 14 to 18 years of age, outshining even the most inexhaustible teen. This is the first time scientists have determined the lifelong growth pattern for the *T. rex*, one of the largest meat-eaters that has ever lived.

"Knowing the lifeline is important because we now understand the evolution of *T. rex's* gigantism, one of the most fascinating aspects of dinosaurs," said Dr. Makovicky. "With the life history parameters, we can better understand *T. rex* evolution, biology, biomechanics and population dynamics."

Reading the bones

While dinosaurs still fascinate us 65 million years after they disappeared, relatively little is known about how they became so big. Scientists have long understood that large weight-bearing bones such as the femur display growth lines much like a tree. But the marrow cavities in these bones expanded as they grew, erasing some lines and making them hard for scientists to read.

This study focused on smaller, non-weight-bearing bones that do not develop hollow cavities and change less with growth, including ribs, fibulae and pubic bones. Their lines are clearer beneath a microscope, and they typically do not need to be cut since they are often already fragmented.

The team examined more than 60 bones from 20 different fossils of four closely related North American tyrannosaurids—*T. rex, Albertosaurus, Gorgosaurus* and *Daspletosaurus.* Three specimens came from The Field Museum's collections, including Sue, the largest, oldest and most complete specimen studied, and Elmer, a younger specimen named after Elmer Riggs, one of the Museum's first paleontologists.

Using an innovative technique that could be applied to other dinosaurs, Dr. Makovicky and his colleagues counted *T. rex's* growth lines to determine its age and calculated the corresponding body size from circumference measurements of the femur. Correlating these two sets of data established the first quantitative growth curve for *T. rex* and its three relatives.

Many reptiles today grow slowly, but *T. rex,* the study says, grew radically in a short period of time—from a 1-ton juvenile to a 6-ton menacing hulk in roughly four years. Furthermore, the growth surge ended after age 19, even though *T. rex* could live to age 30.

"*T. rex* lived fast and died young," said Gregory Erickson, PhD, assistant professor of biological sciences at Florida State University, a Field Museum research associate and the paper's lead author. "They were like the James Dean of dinosaurs."

New view on Sue

This research determined that Sue, The Field Museum's most famous fossil, stopped growing at age 19 and died at age 28. Described as a "train wreck" at the time of death, Sue's bones show significant evidence of disease and injury.

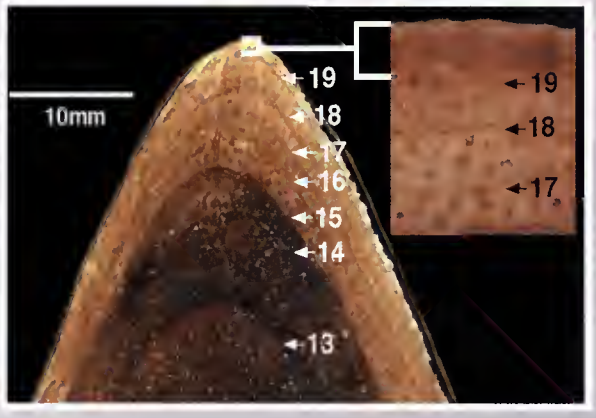
Of the four types studied, *T. rex* demonstrated the largest exponentially accelerated growth curve by far. *Albertosaurus, Gorgosaurus* and *Daspletosaurus* showed a similar four-year growth spurt, but much less pronounced at an average of 11 to 17 ounces (310 to 480 grams) per day. Also, they reached adulthood at 14 to 16 years of age, a little earlier than *T. rex.*

Sue was instrumental to the study by revealing that she had reached her full size nine years before her death, thus demonstrating that *T. rex* could live to almost 30 years, one-third of which was spent at adult size. *T. rex* grew faster than an African elephant, the only living land animal of a comparable size, but lived fewer years. Wild elephants live to age 50, and some captive elephants have lived to age 80.

"We can now stop guessing about how *T. rex* and some of its closest relatives grew," Dr. Makovicky said. "We expect that this empirically based method of developing life patterns from small, amedullar bones (those without a hollow cavity) will be applied to many other types of dinosaurs."

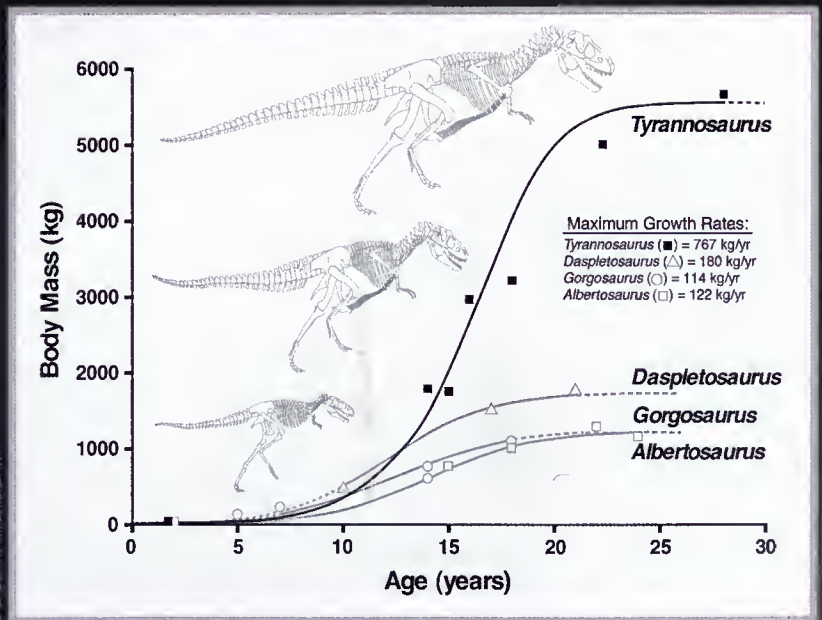
Scientists have learned much about tyrannosaurid neurology, behavior, physical capabilities and other aspects over the past century. Evidence on their life history, however, had been severely lacking. Research has been conducted on the growth rates of other dinosaurs, but since none of these dinosaurs are closely related, they couldn't be used to infer how extreme size change occurred specifically within *Tyrannosaurs.* That's why Dr. Makovicky's team examined multiple bones among closely related species of varying ages.

In addition, recent discoveries have greatly increased the number of substantially complete specimens available at different growth stages, adding to the team's success. More than 30 *T. rex* specimens are known today, whereas only 11 were known in 1993. The team's other coauthors work at the Royal Tyrrell Museum, the American Museum of Natural History, Stanford University and the University of Iowa. **ITF**



Sue's rib shows growth lines corresponding to ages 15 through 19. Inset: Condensed lines on the rib's outer edge indicate Sue stopped growing at 19.

Growth curves for T. rex and three closely related tyrannosaurids.



Machu Picchu: Unveiling the Mystery of the Incas

Looming atop the Andes Mountains of Peru, cloaked in clouds and mystery, is the "lost city" of Machu Picchu--an enduring tribute to the Inca Empire and one of the most magnificent archaeological sites in the world. Hiram Bingham, a Yale University professor, rediscovered the half-square-mile complex of palaces, baths and temples in 1911—more than 400 years after it had been abandoned and the Inca civilization had disappeared.

Through Feb. 13, 2005, The Field Museum is presenting *Machu Picchu: Unveiling the Mystery of the Incas.* With more than 400 artifacts, it's the largest Inca exhibition ever assembled in the United States and the first time most of the artifacts have traveled away from their home museums. Included are items from the Field's collections, such as a striking wooden stool with two carved jaguars, a wooden llama drinking vessel, a royal tunic and a miniature stone tower.



Polychrome wooden stool with jaguar.

JOHN WEINSTEIN/A114206D

Visitors will see videos on Bingham's expedition and recent research; journey down an Inca road; enter the king's sacred residence; find out about such daily-life aspects as metalworking, the production and use of corn beer and religious beliefs on the land and sky; learn about cranial (skull) deformation; view breathtaking panoramas; and, at the end, understand how Inca culture persists today. The exhibition uses the latest audio/visual and computer technology to let visitors experience what it's really like to be at Machu Picchu.

Throughout the 20th century, scientists speculated on Machu Picchu's true purpose. Was it a spiritual center? The birthplace of the empire? A sanctuary for training priestesses and brides? Recent research has revealed that Machu Picchu, which means "old peak" in the Quechua language, was a country estate for the elite.

Machu Picchu's 150 structures were masterfully carved from the gray granite of the Andes Mountains starting in the early 1400s. Many of the stones weigh more than 50 tons, yet they were chiseled so precisely and fit together so exactly that no mortar was used to hold them in place. Stone-lined viaducts brought water to the site.

Superb craftsmanship is also evident in the artifacts. Metallurgists and artisans were well-supported and created impressive pieces for royalty and high-ranking officials. Objects in the exhibition include human figurines, birds and beakers made of gold or silver and stone objects—some stuffed with maize, coca leaves and other substances—that were used in rituals to ensure the fertility of animals. Visitors will also see a jar from a woman healer's cave burial and other artifacts related to astronomical observations and the worship of supernatural forces.

The exhibition also includes items utilized in daily life, such as ceramic jars and plates, tools and special knives that were used to sacrifice animals and worn as pendants. One bronze knife has a pinwheel decoration on the handle, and another depicts a bird with a snake in its beak.

At the turn of the 16th century, nearly 6 million people lived in the Inca Empire's vast territory without the aid of money, writing or wheeled vehicles. However, the empire quickly collapsed after the Spanish conquistadors arrived in 1532, and the royal retreat was abandoned forever. *Machu Picchu: Unveiling the Mystery of the Incas* offers interactive insight into this powerful, magical culture.

The catalog, edited by exhibition curators Lucy Salazar and Richard Burger and published by Yale University Press, is available in the Museum's stores. ITF

Machu Picchu: Unveiling the Mystery of the Incas was organized by the Yale Peabody Museum of Natural History.

Presented by SAP.

Panel Discussion

Kennedys in Chicago

Moderator: Newton Minow

Panelists: Charles U. Daly, Christopher G. Kennedy, Sander Vanocur

Discover the continuing legacy of the Kennedy family in Chicago and understand the fascinating friendship that developed between the Daley and Kennedy families. Chicago hosted two events crucial to Kennedy's election: the 1960 Kennedy/Nixon debate at CBS and the torchlight parade orchestrated by former Mayor Richard J. Daley. This dynamic panel discussion will focus on these historic events, emphasizing John F. Kennedy's position as the first politician to recognize the power of television.

Monday, Feb. 28, 7pm
Reserved seats: $24, members $22
General admission: $20, members $18, students/educators $15 (limited quantity)



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Machu Picchu: Unveiling the Mystery of the Incas

Through February 13, 2005

High atop the Andes Mountains in Peru, the Inca royal retreat of Machu Picchu is a marvel of engineering and craftsmanship. *Machu Picchu: Unveiling the Mystery of the Incas* features the largest collection of Inca artifacts ever assembled in the United States—including gold, silver, ceramics and textiles. This exhibition invites visitors to travel back to the 15th century to see one of the world's most spectacular archaeological sites. You will view a panorama of the high altitude Peruvian cloud forest, walk along a replica of an ancient Inca road and take a self-guided tour of the Machu Picchu palace complex.

Machu Picchu: Unveiling the Mystery of the Incas was organized by the Yale Peabody Museum of Natural History.

Presented by SAP.



DUMBERTON OAKS, PRE-COLOMBIAN COLLECTION, WASHINGTON DC, PC.B.474



The Field Museum

General Museum Information: 312.922.9410
Family and Adult Program Tickets and Information: 312.665.7400

Please note: Refunds will be issued by Field Museum staff, minus a $10 processing fee, for group and family overnights only. No refunds or exchanges are permitted for any other programs. Fees for programs cancelled by The Field Museum will be refunded in full.

Celebrate Carnaval—A Special African Heritage Festival

Saturday, Feb. 5–Saturday, Feb. 26

Take part in any of these magical programs on the fascinating history of Carnaval, a yearly festival celebrated throughout the Americas, but with deep roots in Africa. Call 312.665.7400 for further information.

Family Performance

Experience the best of African and Brazilian arts in this combined family performance featuring Alyo Dance Theatre and Gingarte Capoeira Academy. Alyo will present an energetic, thoughtful blend of dance, song and rhythm in homage to the African Diaspora, and Gingarte highlights the acrobatic art of capoeira, a graceful, daring combination of fighting, dancing, singing and instrumentation with roots in the African slave history of 19th century Brazil.

Saturday, Feb. 5, noon
Free with Museum admission



COURTESY ALYO DANCE THEATRE

Alyo Dance Theatre

Can't get enough of Alyo? Visit the Harold Washington Cultural Center for an additional family dance performance by this talented company dedicated to preserving the link between the traditions and values of African culture and the African-American experience.

Sunday, Feb. 6, 3pm
Free admission
For more information visit www.haroldwashingtonculturalcenter.com.

Panel Discussion

African Spirituality

Dr. Sheila Walker, University of Texas-Austin; Dr. John Stewart, University of California-Davis; Dr. Baba Ifatunji, Chicago State University

Delve into the diverse realm of African spirituality. Experts in African and American Studies will discuss the evolution and transformation of African religious traditions throughout the globe, focusing particularly on their history in South America and Brazil.

Saturday, Feb. 5, 2pm
$16, students/educators $14, members $12



©KRISTIE KAHNS

Family Workshop

Join in the Carnaval fun by making your own colorful masks and playable instruments. Artist Baba Kamau Foluké will lead visitors young and old in crafting their own special items to use in the Carnaval Parade.



For families with children 8 and up
Saturday, Feb. 12, 11am
$15, members $12

Film Screening

Learn more about the widespread religion of Santeria and its African roots through a screening of *The Orisha: The Gods in Exile*. See how this permutation of ancient African religions lives side by side with modern-day cultures and is integrated into festivals such as Carnaval.

Saturday, Feb. 12, noon and 2:30pm
Free with Museum admission

Grand Spectacle

Mask-making Workshop and Carnaval Parade

Make your own lively masks, then participate in an exciting celebration of Carnaval! Experience the rhythms and movements of Bomba, capoeira, a steel pan performance, Brazilian drummers and much more.

Saturday, Feb. 26

Workshop: 11am, for families with children 8 and up
$15, members $12

Parade: 2pm
Free with Museum admission



CATHRYN C. SCOTT/GN90050 14AC

KIMBERLY MAZANEK/GN89142 10C

Panel Discussion

Maintaining Community, Fighting Inequality, Creating Positive Change: Alice Coles of Bayview, Virginia

Moderator: Sokoni Karanja, Director, Centers for New Horizons

Honor Dr. Martin Luther King's birthday with distinguished speakers who will explore issues of community and activism in Chicago. Panelists will discuss Dr. King's "Beloved Community" and tackle the triple evils of racism, poverty and war. They also will talk about Alice Coles, an inspiring activist who incited members of her community to lobby for funding to revitalize their rural Virginia town and provide subsidized housing.

Saturday, Jan. 15, 1 pm
$16, students/educators $14, members $12

Performance

King Performer Keeps Dream Alive

Celebrate the birthday of Dr. Martin Luther King with a moving portrayal of his speeches on nonviolence, faith, love and equality. Chicago actor and singer Kevin McIlvaine, who travels the country portraying the slain civil rights leader, is known for his ability to enthrall audiences as if King himself were speaking.

Friday–Monday, Jan. 14–17, 11am and 2pm
Free with Museum admission



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Family Programs

Family Performance

Peaceable Kingdom

Celebrate the joys of the holiday season with one of Chicago's most unique musical communities. The People's Music School, a collaborative school dedicated to making music education free to all, will perform holiday music representing the cultural communities of the Uptown neighborhood in Chicago's north side.



SAM COMEN

Saturday, Dec. 18,
noon and 2pm
Free with Museum admission

Family Workshop



The Two of Us

Travel The Field Museum's exhibition halls, sing songs, hear stories, touch objects, make art projects and enjoy snacks! Each eight-week session includes fascinating themes of natural and cultural history, from bats to insects to games and art forms.

Families with children ages 3–5
Tuesdays, Jan. 18–March 8
10–11:30am or 1:30–3pm (Choose one time.)
$95, members $80
For each child, one adult attends at no charge.

Adult Programs

Cultural Connections

Narratives: Doorways to Our Communities

Experience cultural diversity without ever leaving Chicago. Local ethnic museums are presenting joint events on issues that affect every community, and this year's theme explores the different ways we all tell stories. In December, participate in *My Uhm-ma Always Said...*, a workshop co-hosted by the Chicago Historical Society and the Korean American Resource and Cultural Center on the tensions between teenagers and their parents in immigrant versus American-born households.

Saturday, Dec. 11, 11:30am–2pm and 3:30–6pm
At the Chicago Historical Society
Register through 312.665.7474 or ccuc@fieldmuseum.org.
Check www.fieldmuseum.org/ccuc/cultural for upcoming spring programs.

Cultural Connections has received generous support from the Chicago Community Trust, The Women's Board of The Field Museum, Lloyd A. Fry Foundation, Bank One, Robert Morris College, Chicago Public Schools' Office of Language and Cultural Education, Richard H. Driehaus Foundation, and Ford Foundation.

Lectures

Impossible Dreams: Everest and World Blindness

Dr. Geoff Tabin, Co-Director of the Himalayan Cataract Project

Transport yourself to the top of the world and learn about the effects of extreme altitude on human physiology. Ophthalmologist Dr. Geoff Tabin has been working for almost 10 years to help the Himalayan people overcome cataracts—a side effect of the intense UV rays present at such high altitudes.

Friday, Dec. 17, 1pm
Free with Museum admission



Exhibitions

Below is a calendar of current and upcoming temporary exhibitions. Some dates may change. Visit our website at www.fieldmuseum.org or call 312.922.9410 as the date of your visit nears.

Design Innovations in Manufactured Housing
February 4, 2005–January 16, 2006

Arctic National Wildlife Refuge: Seasons of Life and Land
February 5, 2005–May 8, 2005

Night Visions: The Secret Designs of Moths
Through January 9, 2005

Urban Expressions: Young Voices, New Technologies
Through January 17, 2005

Scientists at the Field

Meet Field Museum scientists, learn about their personal research interests and see rarely displayed specimens from our collections.

Second Saturday of every month, 11am–2pm
Free with Museum admission


CHARLES L. RICE

Jan. 8: Aaron Rice and Janelle Morano
TFM Fishes Division

Observe the intricate and diverse mechanisms involved in the feeding and swimming habits of vibrant fishes from coral reefs around the world.

Dec. 11: James Boone
TFM Insects Division

What's the difference between butterflies and moths? Why are they so colorful? How do they change from egg to adult? Inspect the insect order *Lepidoptera*, then check out our stunning exhibition, *Night Visions: The Secret Designs of Moths.*


PAUL VELAZCO

Feb. 12: Paul Velazco
TFM Mammals Division

Unravel the molecular relationships among a genus of Peruvian bats, the only mammals that can truly fly.

Under Ancient Incan Skies
Don Cooke, TFM Vice President

The Inca creatively utilized the skies and stars that surrounded them in their daily lives. See the constellations they saw in the southern sky, hear some of their myths and stories and learn about the sky's role in the complex calendar the Inca used to keep track of important ceremonial and agricultural dates.

Saturday, Dec. 18, 1 and 3pm
Free with Museum admission

Uncovering Ancient China

Be the first to see what The Field Museum-Shandong University team finds during an archaeological survey in southeastern Shandong Province, China. Sign up for expeditions@fieldmuseum™, an exciting program in which you receive personal dispatches from scientists in the field. You'll hear about the work of Gary Feinman, Anne Underhill, Linda Nicholas and their colleagues as they continue their survey around Yaowangcheng, a large site from the Longshan period (2600–2000 BC) that rivals Liangchengzhen, the famous site where they began their survey. Their findings are expanding our understanding of how early complex societies developed in northern China.

To register, email expeditions@fieldmuseum.org or visit www.fieldmuseum.org/expeditions.


COURTESY OF ANNE UNDERHILL

Machu Picchu: Unveiling the Mystery of the Incas
Through February 13, 2005

Jacqueline Kennedy: The White House Years—Selections from the John F. Kennedy Library and Museum
Through May 8, 2005

Treasures of the Americas: Selections From the Anthropology Collections of The Field Museum
Through May 30, 2005

Explore unknown worlds with

NATIONAL GEOGRAPHIC LIVE!

Join us for the fourth adventure-filled season of presentations by world-renowned photographers, explorers and scientists.

Return to Titanic

Robert Ballard, Deep-Sea Explorer



EMORY KRISTOF

Dive into the fascinating underwater world of this renowned explorer as he searches the seafloor for clues to ancient history. Best known for his 1985 discovery of the remains of the Titanic, Dr. Ballard has located numerous important wrecks, including President Kennedy's ill-fated PT boat.

Tuesday, February 8, 7:30pm

Solo Across the Poles

Børge Ousland, Polar Explorer

Strap on the skis and get ready for a frigid adventure across the North Pole. You'll see how Ousland crossed 1,240 miles of ice floes and seawater, successfully eluded arctic wolves and polar bears, and survived the solitude of an 82-day solo expedition.

Tuesday, March 8, 7:30pm



BORGE OUSLAND



JASMIN VRANESIC

Inside Secret Worlds

Jodi Cobb, Photographer

Gain access to some of the world's most secretive societies—such as Japanese geishas and the underworld trade in human beings—with this seasoned photographer whose ability to access "closed" subcultures has informed some of National Geographic Magazine's most memorable stories.

Tuesday, March 22, 7:30pm

Jungles

Frans Lanting, Photographer



FRANS LANTING

Be inspired by some of Earth's most spectacular landscapes through the eyes of this veteran photographer. Lanting's work, on view in the upcoming Jungles exhibition, continues to focus on the importance of conservation and has increased worldwide awareness of endangered ecological treasures.

Tuesday, April 12, 7:30pm

Tracing the Journey of Man

Spencer Wells, Geneticist and Anthropologist



©MARK READ

Discover Dr. Wells' unique answer to the age-old question: "Where did we come from?" You'll find out how cutting-edge DNA studies have led him to the dramatic conclusion that all modern humans trace their ancestry to one man who lived in Africa 60,000 years ago.

Tuesday, May 10, 7:30pm

Ticket Information

Call 312.665.7400 or visit **www.nationalgeographic.com/nglive** to purchase tickets. A limited number will be available onsite the day of the event starting at 5:30pm, but we recommend reserving tickets in advance since this series sells out.

Also, a series subscription makes a great gift! We'll send the tickets along with a personalized gift card at your request.

Series Subscriptions—On Sale Now

Explorers Circle: *Ensure the continuation of NG Live! Benefits include reserved seating, a private reception and signed book: $390; TFM, NG and Geographic Society of Chicago members $375. (Note: $150 of ticket price is deductible. Receipt provided upon request.)*

Patron *(reserved seating): $140; TFM, NG and Geographic Society of Chicago members $125.*

General admission: *$105; TFM, NG and Geographic Society of Chicago members $90; students $60.*

Individual Events—On Sale January 17

Patron *(reserved seating): $30; TFM, NG and Geographic Society of Chicago members $28.*

General admission: *$24; TFM, NG and Geographic Society of Chicago members $22; students $15.*

Series Sponsors The Field Associates—a dynamic, diverse group of young professionals dedicated to promoting awareness of The Field Museum's collections, research and public programs. For information or to join call 312.665.7133 or visit www.fieldmuseum.org/fieldassociates.

Educational outreach activities related to the series are presented in collaboration with The Field Museum, the Geographic Society of Chicago and the Illinois Geographic Alliance.

Lectures, Films Provide New Perspective on Sixties

Film Screenings

A Tour of the White House with Mrs. John F. Kennedy

First lady Jacqueline Kennedy serves as the tour guide in this Emmy-award winning documentary first broadcast on Feb. 14, 1962. The film showcases Mrs. Kennedy's successful campaign to renovate the White House with authentic furnishings and period pieces, and also features behind-the-scenes footage of the exhibition.

Second Saturday and Sunday of every month from Dec. 11–May 8, 11am

Running time: 58 minutes
Free with Museum admission

PT 109

Check out this suspenseful, fact-based 1963 drama about the youthful John F. Kennedy and his wartime experiences, including the sinking of the PT boat he was captaining.

Second Saturday and Sunday of every month from Dec. 11–May 8, 1:30pm

Running time: 2 hrs. 20 min.
Free with Museum admission

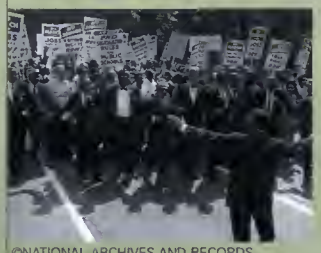


COURTESY HUGH SIDEY

This exhibition was organized by The John F. Kennedy Library and Museum and The Metropolitan Museum of Art.

This exhibition is made possible through the generous support of The Grainger Foundation and Marshall Field's.

Adult Mini-Course



©NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

The Sixties

Jeremi Suri, University of Wisconsin

Go back to the most turbulent, most memorable—and undoubtedly most controversial—decade of the 20th century. Join The Field Museum and National Video Resources in a stimulating film screening and discussion series exploring the United States during the 1960s, when foreign involvements intensified, tensions over civil rights escalated and cultural stirrings found expression in rock and roll and the Beat movement.

Saturdays, Jan. 22 and 29, 10am–2pm
$45, members $40

Lecture

Inside the White House

Hugh Sidey, Washington Contributing Editor, Time *Magazine*

Laced with humor, Hugh Sidey's presentation will offer rare insight on the White House from an insider's perspective. Having personally known every president since Dwight Eisenhower, Sidey will examine the Kennedy Administration—from the Vienna Summit to that fateful day in Dallas—and the contemporary history of America's most famous home.

Wednesday, March 30, 7pm
Reserved seats: $24, members $22
General admission: $20, members $18, students/educators $15 (limited quantity)

Extend your exhibition experience at Marshall Field's.

In celebration of *Jacqueline Kennedy: The White House Years—Selections from the John F. Kennedy Library and Museum*, the exhibition's corporate sponsor, Marshall Field's, will have two special exhibits on display at its State Street store.

Beginning mid-January, look for a beautiful interpretation of Mrs. Kennedy's wedding gown created by renowned Belgian artist, Isabelle de Borchgrave (pictured below). Marshall Field's will also display an exhibit of photographs by Mark Shaw—the Kennedy family's photographer during their White House years.



©MARSHALL FIELD'S

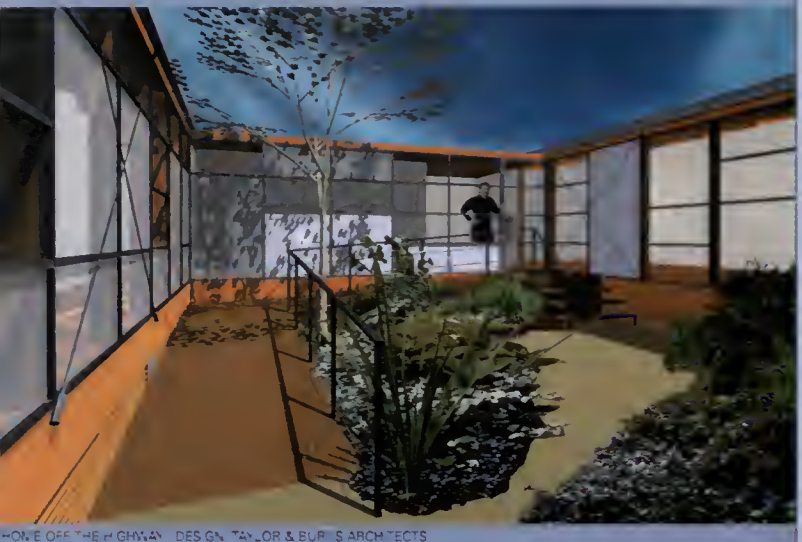
For information and dates, please call Marshall Field's tourism sales and marketing department at 312.781.4699.

Investigate cultural phenomena and see spectacular landscapes.

Design Innovations in Manufactured Housing

February 4, 2005–January 16, 2006

Original models and drawings by noted architects and industrial designers offer creative solutions for pre-fabricated homes.



HOME OF THE HIGHWAY DESIGN, TAYLOR & BURNS ARCHITECTS

This exhibition was developed by the City Design Center, College of Architecture and the Arts, University of Illinois at Chicago, in collaboration with The Field Museum. The City Design Center, College of Architecture and the Arts, University of Illinois at Chicago received funds from the National Endowment for the Arts and the Graham Foundation for Advanced Studies in the Fine Arts to create this exhibition.

Arctic National Wildlife Refuge: Seasons of Life and Land

February 5–May 8, 2005

Luminous photographs capture the fragile beauty of the Arctic National Wildlife Refuge in Alaska.



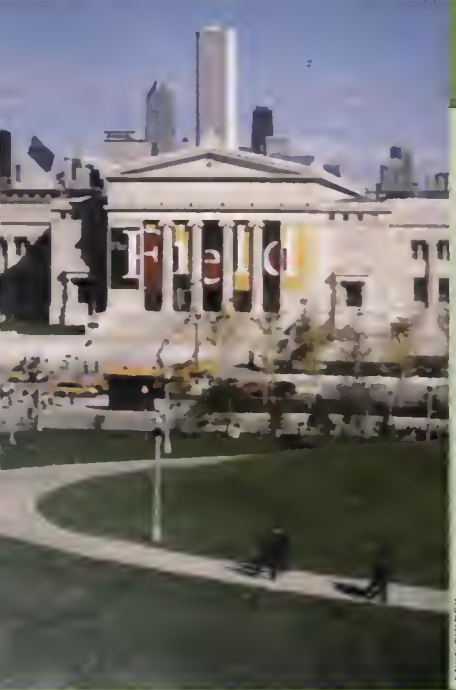
©SUBHANKER BANERJEE/COURTESY GER PETERS GALLERY, SANTA FE-NEW Y

Arctic National Wildlife Refuge: Seasons of Life and Land is an exhibition of photography by Subhanker Banerjee designed and produced by the California Academy of Sciences, San Francisco, California.

Pawnee Earth Lodge

Ongoing

Visit this newly renovated example of a Pawnee dwelling, extraordinarily true to original form and use. Originally built and dedicated in 1977 under the active guidance of Pawnee tribal members, the Pawnee Earth Lodge has been visited by more than 3.7 million people in the past 27 years.



MIKE SIOREK

Visitor Information



Getting Here: Soldier Field's parking garage is open across the street from our main entrance. Visit www.fieldmuseum.org for the latest information on new parking lots/rates, free trolleys and public transit.

Hours: 9am–5pm daily. Last admission at 4pm.

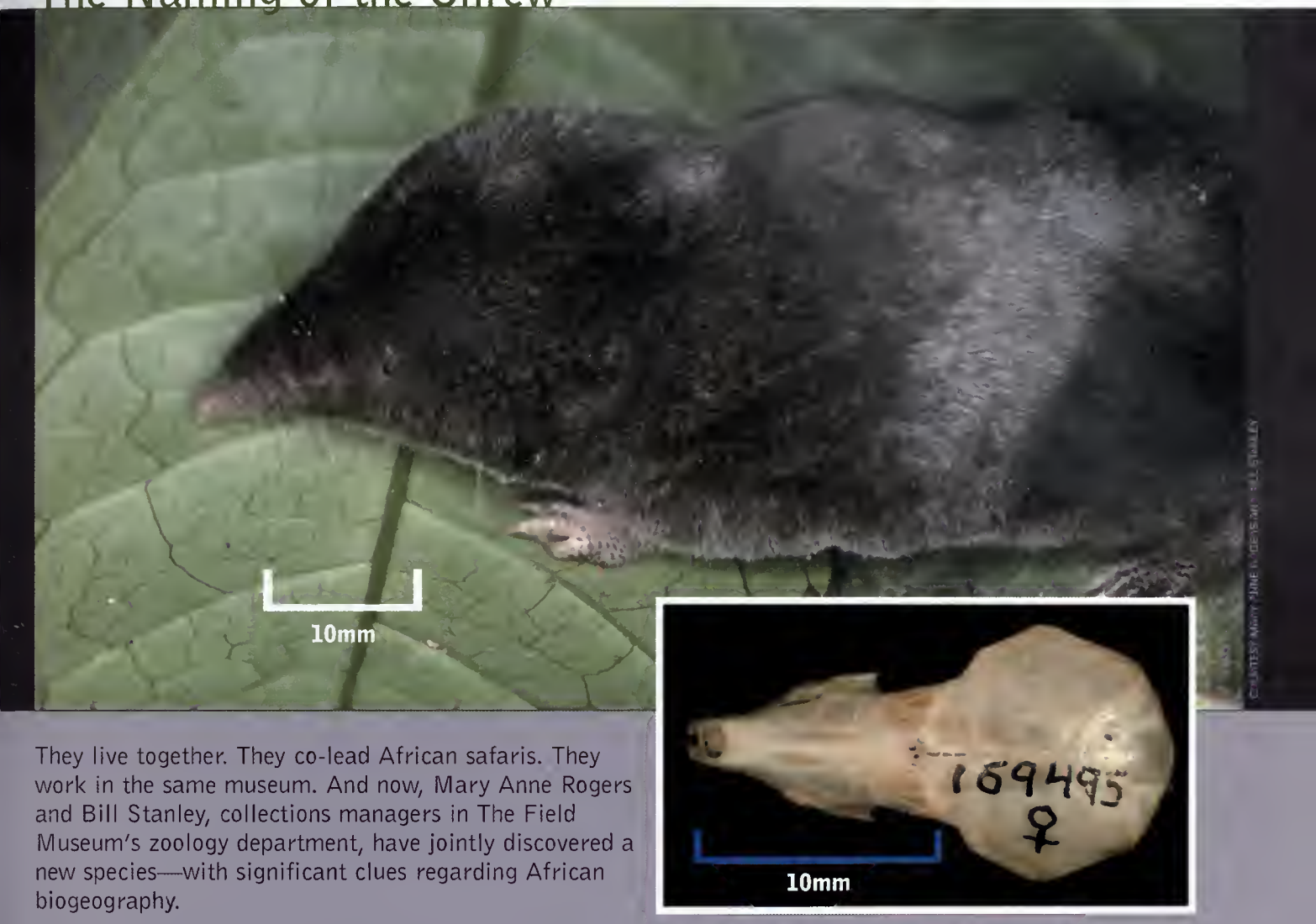
Admission and Tickets: Member passes can be reserved through the membership department (312.665.7705) or picked up at the membership services desk. For non-members, The Field Museum's new gold pass, which includes general admission plus one special exhibition, ranges in price from $8 to $19, depending on your age category and whether you are a Chicago resident. Please bring your ID to receive the appropriate ticket price. Please note that the gold pass does not apply to the Jacqueline Kennedy exhibition.

Accessibility: Visitors using wheelchairs or strollers may be dropped off at the west entrance. Handicapped parking and wheelchairs are available on a first-come, first-served basis. Call 312.665.7400 to check on the accessibility of programs that take place outside of the Museum.

Information: 312.922.9410 or www.fieldmuseum.org

The people of Chicago for ... programs are partially supported by a Cultural ... City of Chicago Department of Cultural Affairs and the ... Arts Council, a state agency.

The Naming of the Shrew



They live together. They co-lead African safaris. They work in the same museum. And now, Mary Anne Rogers and Bill Stanley, collections managers in The Field Museum's zoology department, have jointly discovered a new species—with significant clues regarding African biogeography.

A new shrew species.

Identifying a new shrew is not particularly earthshaking. But when Rogers was examining what she thought was a *Myosorex* specimen, she noticed two peculiarities: the lack of a minute upper tooth common in other shrews from the same area; and a mysterious slit in the top of its skull that no other adult mammals have.

She and Stanley hurriedly emailed a picture to Rainer Hutterer, a Field Museum research associate in Germany and an expert on African shrews. Within minutes he responded that it seemed to belong to the genus *Congosorex* and that it was a new species, making this only the third species of *Congosorex* ever found.

Interestingly, fewer than 20 *Congosorex* specimens had ever been found, and all were from the Congo Basin—nowhere near the spot where this specimen had been collected in Tanzania. The finding supports the idea of a historical swath of forest that spanned half the width of equatorial Africa, a distance of approximately 1,000 miles.

The discovery also heightens scientific interest in Tanzania's Udzungwa forests, a portion of the Eastern Arc Mountains where Stanley has been studying mammals for years. The Udzungwa partridge lives here as well, whose nearest living relative is found in Asia. The new shrew, which will be named after Tanzanian colleagues, strengthens the impression of these mountains as a secret world of organisms with ancient affinities and globe-spanning biogeographic ties.

Trading People: Archaeological Evidence on the Kenyan Coast

Chapurukha M. Kusimba and Sibel B. Kusimba, Curators, Department of Anthropology



The Arabs would come to Kasigau to trade and pretend they wanted elephant tusks and rhino horns. [They] would ask for porters to help carry it, at least part of the way, to the coast ... where they would be ambushed by more Arabs. They would be shackled together in a chain gang and marched to the coast. This happened to all the Kasigau communities. ... They endured a lot of pain and sadness.

–John Mwazaule,
Mount Kasigau, Tsavo, Kenya

Arab slave traders feeding captives. Taken from My Second Journey through Equatorial Africa, *by Hermann von Wissman.*

Unlike the Atlantic slave trade, that of the Indian Ocean has received comparatively little archaeological attention. Tsavo, which lies 150 kilometers from the Kenyan coast, was a primary source for elephant ivory, rhinoceros horns and rock crystal during the last 2,000 years. When long-distance trade intensified between the coast and interior, Tsavo gained a reputation as a harsh desert few could pass through alive, especially because of slave raiding. That, combined with its arid ecosystem, man-eating lions and disease-carrying flies, has caused researchers to assume that few people settled there or interacted with the coast. To exclude Tsavo from research is to ignore its significant cultural past.

Since 2000, we have unearthed more than 250 new archaeological sites in Tsavo National Park that are helping us understand the relationship between the affluent Islamic coastal city-states and the rural hinterland in pre-colonial East Africa. Radiocarbon dates show that people have lived in Tsavo continuously for 13,000 years as hunters, gatherers, herders, farmers, pottery makers and iron workers. They were connected to global markets via coastal traders and were, at one point, the primary suppliers of ivory destined for southwestern and southern Asia.

Evidence of slave trade found in shelters

In the 15th century, the Portuguese conquered the coastal region and used ivory and slaves to support their vast dominion. Slave raiding caused widespread insecurity, famine, diseases and warfare, lessening populations and hastening the collapse of East Africa's farming and pastoral systems. Interethnic conflicts and warfare transformed former trading partners into foes. One study reports that between 1770 and 1896, more than 424,000 people were exported and more than 833,000 people were retained as slaves in Africa.

Our findings suggest that beginning in the 16th century, the people of Tsavo abandoned their settlements in the valleys and plains for the safety of the hills and mountains. In addition, legitimate trade declined, and regional isolationism increased. What caused these relationships to change so radically?

To answer this question, we turn to our excavations at the Waata rockshelter of Kisio. In one deposit, dating to 1,000 years ago, we found quartz, obsidian and chert stone tools, pottery and diverse fauna characteristic of a hunter-gatherer population. We also recovered beads, which show contact with coastal traders. At that time the Waata were reputedly the finest elephant trackers and hunters, and they invented a fast-killing poison that became a desirable trade item among East African groups.

The second Waata deposit, dating to 1850 AD, included animal bones, stone tools, pottery and artifacts indicative of contact with iron smelters and coastal traders. But it also revealed that the residents of Kisio subsisted largely on small non-migratory mammals and birds, highly unusual for respected



JOHN WEINSTEIN/2983222C



CHAP KUSIMBA

Left: Excavating a rockshelter in Kasigau, Tsavo.

Right: Artifacts found at Mwaapa.

ivory traders and poison makers. Agriculturalists elsewhere were abandoning their homesteads, and pastoralists disappeared altogether.

Three rockshelters that we excavated intensively are providing clues as to what was occurring. First, all the enclosures were constructed after the Portuguese conquered the coast and large-scale slavery became institutionalized. Second, they have separate partitioned areas for livestock, where we found copious amounts of dung, and for people, which contained cultural artifacts such as beds and hearths. Third, all three sites had barely discernible exits that may have allowed occupants to leave undetected. And fourth, an elaborate system used to build the walls indicates that efficiency, security and cooperation drove their design.

Oral traditions corroborate archaeological finds

How may we interpret the mighty Waata's dependence on small frogs and snails and the abrupt construction, use and abandonment of the fortified rockshelters? The stories we have collected from local ethnic groups repeatedly refer to drought, famine, disease, conflict, migration and slavery, among other tragedies. Even the once-sacred brotherhood alliances in which women and children were safely placed in another group's custody lost meaning.

For example, the pastoral Maasai frequently raided neighboring groups for cattle. The Kasigau warriors would retaliate, recovering their own cattle, as well as women and children. At some point, the Maasai also began counting people, including men, into their booty. We think they were replenishing their own lost populations and selling the men to Arab and Swahili slave dealers.

At the same time, as more elephants were killed, the once-open savannahs reverted to woodland scrub and forests that attracted the tsetse fly, a vector that transmits sleeping sickness to people and trypanosomiasis to cattle and wildlife. As the lowlands became more inhospitable, the peoples of Tsavo retreated into the hills and other fly-free habitats.

While our research in Tsavo is revealing the horrors of slavery, it is also pointing out ingenious ways in which people resisted enslavement and colonization and continued to forge communities. They clearly cooperated in building the fortified settlements that ring Mount Kasigau, which were likely used as lookouts to defend and warn the people of impending danger. In peaceful times these shelters served as cattle and goat pens.

It is time archaeologists began investigating the shelters further to ascertain, with the aid of historical and oral traditions, whether and how they represent African peoples' responses to slavery. Coastal and interior settlements may disclose a slave system that was as well established as those in the United States, South America and the Caribbean. Only then will we understand the impact slavery has had on individual lives and the cultural and political landscape of Africa today. **ITF**

Sites with human remains defined communities and claims to land that was scarce in slave refugee areas.

Illustration courtesy The Atlantic Slave Trade and Slave Life in the Americas website, sponsored by the Virginia Foundation for the Humanities and the University of Virginia Library.

Diversity Project Reaches Untapped Communities

Tiffany Plate, Writer, and Patricia Williams-Lessane, Program Administrator, Department of Education

Patricia Williams-Lessane knows her way around Chicago. From Rogers Park to Bronzeville, North Lawndale to Harvey, she's made friends in community organizations near and far. Truly, she is the face of The Field Museum for people in underserved neighborhoods—a trusted representative providing free tickets to programs, books on exhibition-related topics and, most importantly, personal contact.



MARK WIDHALM/GN90552.18D

Kim Lindsey, of Faith Pentecostal Church, with her children.

In 1999, with a grant from the National Recreation Foundation (NRF), the Museum provided 88 scholarships—approximately 18 percent of total attendance—for the Museum Campus' ever-popular summer camp. We asked the organizations we already worked with to refer children, and soon the Museum was awash in groups wanting to participate. The NRF took note and challenged the Museum to offer free scholarships to 20 percent of all of its programs. Thus began the Diversity Project, which to date has reached nearly 10,000 children and their families.

Williams-Lessane, the project's administrator, now works with more than 30 partners—including YMCAs, churches, schools and individual families—to identify the best children and families to take advantage of learning opportunities at the Field. Faith Pentecostal Church in Auburn Park exemplifies a Diversity Project partner.

"Our church has a mix of children from very different socioeconomic backgrounds," said Kim Lindsey, the church's youth director. "Some are privileged, others are underprivileged, and none of them ever go to The Field Museum or other cultural places in the city.

The Diversity Project has definitely broadened their horizons. My kids are well versed on cultures beyond their immediate environment. Summer camp, especially, has stirred up interest in animals and tribal customs in my oldest son."

Theresa Rodriguez's children attended an overnight at the Museum with Erie Neighborhood House, a social service agency in West Town. They enjoyed themselves so much that Rodriguez suggested her church, St. Anthony, become involved.

"I loved it and wanted our church to be a part of this. Rev. Joanne [Hendricks] said it was a great idea because so many of our children hadn't been to the Museum, much less had the opportunity to spend the night and have first-hand exposure to education and culture!"

Scholarships are also given out for Dozin' with the Dinos, a program in which families explore the Museum by flashlight, then sleep amid our exhibitions. The Diversity Project also distributes family memberships, provides funds for transportation to the Museum and offers workshops at community partner sites.

Another important component of the Diversity Project, the Urban Network, brought together 10 cultural institutions in five major cities to discuss issues of accessibility. The resulting publication, *Urban Network: Museums Embracing Communities,* includes case studies, program blue prints and thoughtful essays about the challenges of making museums non-threatening—even exciting—places to go.

The Museum hopes to continue evolving in response to its Diversity Project partnerships, bringing the wonders of the Earth and its peoples to a diverse audience.

For program information, email diversityproject@fieldmuseum.org. To order the Urban Network book, visit the American Association of Museums website at www.aam-us.org.

Grant to Reunite Ancient Iraqi Collections

Greg Borzo, Media Manager, Scientific Affairs

The Field Museum is embarking on a two-year project that could help bridge cultural and scientific barriers exacerbated by the Iraq war. With support from the National Endowment for the Humanities (NEH), the Museum recently began to study, catalog and reconcile the scattered but priceless collections from Kish, the famous 5,000-year-old archaeological site 50 miles south of Baghdad. Kish is one of the world's first cities. The first wheels anywhere were found here, and two are in The Field Museum's collection.

The Museum plans to create a digital catalog in Arabic and English of the more than 100,000 Kish artifacts held in Chicago, London and Baghdad. The catalog will be available on the Internet and in print, along with a more complete database.

"This project will make possible, for the first time, a true reckoning of the site's historical and archaeological significance," said William Pestle, a collections manager in the Museum's anthropology department and one of the project's principal investigators. "It will also serve as a model for intellectual repatriation of exported archaeological collections."

From 1923 to 1933, archaeologists from The Field Museum and Oxford University's Ashmolean Museum excavated at Kish and divided the artifacts with the Iraq Museum in Baghdad. The collections are still separated. The $100,000 NEH grant will allow us to:

- Catalog uncataloged objects;
- Reconcile the entire collection and numbers assigned to the objects with excavation records and field notes;
- Stabilize at-risk objects;
- Scan and/or photograph important objects and records;
- Disseminate the information around the world.

Work has already begun on the Field and Oxford portions. Once Iraq stabilizes, efforts will continue at the Iraq Museum, which was heavily looted at the start of the war.

"The lack of a final, complete site report stands as a significant gap in the archaeological record of Mesopotamia," said Ben Bronson, Field Museum curator of Asian archaeology. "This catalog will facilitate researchers' access to all three Kish collections.

"Furthermore, it will directly benefit the Iraqi people by providing detailed information on the state, condition and interconnectedness of this important portion of their cultural patrimony," Bronson added.

The Field Museum holds about 32,000 Kish objects, including cuneiform tablets, cylinder seals, stone and metal implements, pots and sculptures. Original field cards will determine much archaeological context, which is vital to understanding the objects' use and meaning.

The Museum also holds 1,740 photographs and 1,200 feet of film that vividly show work teams of up to hundreds of people. The excavation's head team included Henry Field, a nephew of Marshall Field, the department store magnate who helped start The Field Museum.

Initial excavations centered on the Uhaimir mound, the location of a notable terraced pyramid. Later, workers uncovered Kish's famous chariot burials, wherein chariots pulled by live oxen were buried alongside high status individuals to provide transportation in the afterlife.

No other excavations occurred at Kish until the 1990s, but the war has halted that work. "The Kish collections remain a largely untapped archaeological, cultural and historical resource," Pestle said.

Left: Henry Field and an excavation specialist examine exposed chariot wheels.

Right: Workers, including women and children working barefooted, clearing a palace.





Catching the Bronze Wave: A Sculpture's Real-Life Story

Peter von Baol, Volunteer, Traveling the Pacific Exhibition Hall

Few exhibitions in The Field Museum's history have generated as much adoration as Malvina Hoffman's bronze sculptures. In 1930, the Museum commissioned Hoffman, who studied under Auguste Rodin, to create life-size busts, heads and figures for its Hall of the Races of Mankind, which closed in 1968. Hoffman and her husband, Samuel Grimson, traveled the world in search of individuals who typified each of the 104 races identified by anthropologists of the time. Experts helped her choose subjects in each location. The resulting works are an incomparable study of science and art, sacrificing neither precision nor beauty in the people they embody.

Hoffman depicted surfer Sargent Hiikua Kahanamoku to represent a Hawaiian. Sargent was the youngest of nine children, including Olympic multi-medalist Duke Kahanamoku, considered the father of modern-day surfing. Hoffman sought one of the Kahanamoku brothers to model for *Bronze Surf Rider,* noting in her autobiography, *Heads and Tales,* that they were "all remarkable [for their] physical prowess."



A study photograph of Sargent Kahanamoku to aid Malvina Hoffman in sculpting him.

SAMUEL GRIMSON//A79370

They were, however, "bitterly opposed" to cooperating because another sculptor had forced one of them to sit in a plaster body cast for hours. Only after she began taking surfing and swimming lessons from Waikiki's other professional "beach boys, the bronzed Apollos who seem such a menace and lure to the pale-faced visiting ladies," did she meet Sargent.

"He consented to do all his best aquatic stunts for us. Moving pictures and stills were taken, and after reassuring him … that my purpose in asking him to pose included a guarantee that no plaster-casting was to be even mentioned, … we began work at once," she wrote.

Long intrigued by this particular statue, I located Sargent's widow, Mary Ray Kahanamoku. She invited my wife, Carrie, and me to have lunch with her on Waikiki Beach when we vacationed there earlier this year. We dined at an oceanfront restaurant just a few feet from where Grimson and Hoffman had filmed Sargent swimming.

Mary Ray still glows when she discusses Sargent, whom she said remained a skilled athlete throughout his lifetime. She said his "magnetic personality made him the perfect man" in his later years as a public relations executive for what was then called Standard Oil-California (SOCAL). He once showed her a picture of Shirley Temple on his shoulders as they caught a wave.

"He would meet all of the company's VIPs, bedeck them with leis, tour them around, and, of course, take them out in an outrigger canoe, or teach them to surf, or have a few rounds of golf," she said. "What a job! He never sat at a desk and was always on the move!"

Mary Ray had forgotten Hoffman's visit and was pleased to learn of the Museum's statue. One of her prized possessions is a tabletop sculpture of Sargent that Hoffman had made as a gift.

In addition to the 104 full-size bronzes, the Hoffman collection includes plaster casts, photographs and film, a complete set of miniature plasters and some associated bronzes, and stone busts that were made as an experiment. The anthropology department recently received a conservation grant from the Getty Center to assess the collection's condition and catalog it fully. The portions not on display will soon move to the Collections Resource Center (related story on pages 2–3), where they will be made more accessible to artists, art historians and others interested in studying this remarkable collection that blends art and science.

Sargent Kahanamoku died on May 16, 1993. Stop by the Museum's west entrance to see Malvina Hoffman's gorgeous bronze depiction of him.

Double Discount Shopping Days



STEVEN RATHBONE

This holiday season, avoid the headaches shopping can bring with one trip to The Field Museum's stores. On Nov. 29 through Dec. 5, as well as Dec. 12 and 13, members receive 20 percent off all Museum merchandise—an additional 10 percent over your regular discount.

For the woman who admires Jacqueline Kennedy, choose from a variety of fine dining accessories, elegant jewelry or the exhibition's gorgeous companion catalog. Our children's items offer both fun and learning, such as plush toys, excavation kits and books on other cultures. Only a few 18th century Chinese antiques remain, including hand-painted furniture and jade objects. And for the world traveler, assemble a package that might contain a journal bound in an Indian sari, a hand-woven hat from Peru and a book on staying healthy abroad.

Bring your membership card, or have your number handy if you visit the online store at http://store.fieldmuseum.org.

The Essential Year-round Gift

For friends and family who seem to have everything, a Field Museum membership can be enjoyed all year. Available at four levels—$70 (individual), $80 (family), $150 (Annual Fund) and $1,500 and above (Founders' Council)—membership offers terrific benefits, including:

- Free basic admission every day;
- Tickets to special exhibitions;
- A subscription to *In the Field*, our award-winning member publication;
- Discounts on educational programs, food and merchandise;
- Exclusive events and behind-the-scenes tours.

To purchase the $70 or $80 gift membership, call 866.312.2781. For the $150 or $1,500 levels, call 312.665.7777. Or, mail in the form below to Membership Department, The Field Museum, 1400 S. Lake Shore Dr., Chicago, IL 60605.

Yes, I'd like to give someone a Field Museum membership.

Copy this form for multiple gifts.

☐ $70 Individual ☐ $80 Family ☐ $150 Annual Fund ☐ $1,500 and above Founders' Council

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ACCOUNT NUMBER: _____ EXP. DATE: _____ SIGNATURE: _____

Mail to:

Membership Department, The Field Museum, 1400 S. Lake Shore Dr., Chicago, IL 60605

Rebuilding Your Museum



CHRISTINE TAYLOR

The Changing of the Guards' House

Majestic, mysterious and elaborately clad in feathers, the Papua New Guinea costumed mannequins flanking The Field Museum's south entrance are like silent guards protecting all who pass through the building. But their 72-year-old exhibit cases needed repair, taking these sentries off duty for almost two months.

Moving the fragile 14- and 19-foot-tall mannequins was a difficult undertaking. First, glazers had to cautiously remove the cases' glass. Staff then cut through the case platforms and used a forklift to raise the base with the entire display left intact. Next, a wooden frame was built around the mannequins and covered with protective plastic. The figures were slowly and carefully transported to temporary storage. Once the cases' plaster and paint were restored, the process was repeated in reverse to return the figures, and new glass was installed.

A core crew of six people and about 10 other staff members, all from the exhibitions and conservation departments, accomplished the project without incident—another testimony to the care The Field Museum takes with its collections. Stop by next time you are here to salute the figures in their renovated homes.



A.B. LEWIS/CSA3415

Top: Protecting the masks for their move and temporary storage.

Right: A 1910 procession showing masks similar to those found in Stanley Field Hall. Awar, Hansa Bay, Madang Province, Papua New Guinea.

The Field Museum's Member Publication

IN THE FIELD

Spring 2005
March–May



Fossil Plants and Land Elevations

Deep-Sea Wood Falls

This Just in From The Field Museum



JOHN WEINSTEIN /GN88119.6

It's not uncommon for major stories featuring a Field Museum scientist to hit the press almost weekly, and 2004 was an exceptionally newsworthy year for our scientific team. While I can't list every accomplishment celebrated in media outlets around the world, here are some interesting highlights.

- As part of Common Ground, a Museum-wide effort to digitize our holdings, the botany department made great strides in digitizing its collections to enhance scholarly and public access. The department also progressed with V-Plants Plus, a groundbreaking collaboration with the Chicago Botanic Garden and The Morton Arboretum to create an online virtual herbarium featuring area plants.
- Alaka Wali and the Center for Cultural Understanding and Change completed an award-winning analysis of Lake Calumet's social assets, or strengths, to describe the region's potential for economic and environmental revitalization.
- Zoologist Bruce Patterson and his colleagues concluded that it would only require $8,749 annually to offset the damage of 26 lions on 160,000 acres of ranchland in Kenya, helping to mitigate human-lion clashes over livestock.

A radio-collared lion on Kenya's Taita Ranch in search of dinner.



BRUCE PATTERSON

- Illinois took the peregrine falcon off its Endangered Species List, with great thanks to zoologist Mary Hennen, a vigorous falcon steward.
- Geologist Peter Makovicky and his colleagues counted rings on Sue's bones to describe the lifelong growth pattern for *Tyrannosaurus rex* that included an extraordinary growth spurt in its teen years. Sue died at about 28.
- Anthropologist Ryan Williams and his colleagues discovered the Andes' oldest, large-scale brewery on a remote mountaintop in Peru. It produced a beer-like beverage used for ritual feasting and drinking during the time of the Wari Empire (AD 600–1000).
- The ongoing work of Debra Moskovits and the Museum's Environmental and Conservation Programs led to the creation of a vast national sanctuary in Peru. This will help ensure the protection of thousands of species, halt advancing deforestation and support indigenous peoples and their cultures.
- Department of Geology Chair Olivier Rieppel and his colleagues determined that the ancient Chinese reptile *Dinocephalosaurus,* which means "terrible-headed lizard," used its extremely long neck to suck in prey—a feeding method never before encountered.
- A team of anthropologists secured a $100,000 grant from the National Endowment for the Humanities to catalog, digitize and reconcile ancient Mesopotamian artifacts split between London, Baghdad and Chicago. The artifacts are from Kish, the famous 5,000-year-old archaeological site 50 miles south of Baghdad.
- Geologist Jennifer McElwain developed a novel way to determine ancient land elevations. (See pages 2–3 for more.)
- Zoologist Phil Willink identified a fish found in Lake Michigan as the dreaded Northern Snakehead and led efforts to search for more of this invasive predator. None was found.
- Anthropologist William Pestle and his colleagues used portable, digital X-ray equipment on mummies, pots and skeletons to obtain instant, cutting-edge images. (See page 15.)
- Anthropologist Jonathan Haas and his colleagues discovered that America's first civilization in Norte Chico, Peru, was an immense complex of more than 20 urban centers that began about 5,000 years ago and survived 1,200 years.

Each research milestone hailed in the media is often the result of years of work involving multiple people and institutions. I hope you feel a special sense of connection and ownership every time you read about The Field Museum, as your membership directly supports each scientist's extraordinary work.

John McCarter

John W. McCarter, Jr.
President and CEO

What do you think about In the Field?

For general membership inquiries, including address changes, call 866.312.2781. For questions about the magazine *In the Field,* call 312.665.7115, email acranch@fmnh.org, or write Amy E. Cranch, Editor, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496.

INTHEFIELD

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Cover: Surface of a California black oak leaf (*Quercus kelloggii*) magnified 400 times and showing epidermal cells, stomata and stellate, or star-shaped hairs. ©Jennifer McElwain.

The Field Museum salutes the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District.

The Field Museum

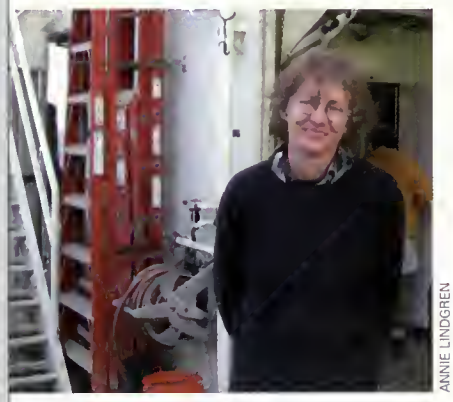
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JOHN WEINSTEIN/GEO86406.01D1



COURTESY WILLIAM PESTLE



ANNIE LINDGREN

2

A Field Museum paleobotanist has developed a way to determine ancient land elevations that involves tree leaves.
Top: A 15-million-year-old fossil California black oak leaf (Quercus kelloggii).

4

A peculiar fossil mammal brings together two Field Museum scientists from different disciplines in describing it.

15

Digital X-rays revealed previously unattainable images of mummies and other objects.
Middle: A 1,500-year-old Moche vessel from Peru that whistles when fluid is decanted.

16

A Field Museum zoologist deployed wood on the deep ocean floor to see what diverse animals would colonize it.
Bottom: Dr. Janet Voight at sea.

Museum Campus Neighbors

Adler Planetarium It's *A Race to the Edge of the Universe* on May 12! The Adler Planetarium celebrates 75 years of exploration with this anniversary sky show that examines exciting space advancements, from the discovery of Pluto to the continuous search for life beyond Earth. Then, time travel begins on July 1st! Experience *TimeSpace,* a 3-D show that transforms the Adler into a portal to dazzling astronomical events in history. For more information on this or other current shows, visit www.adlerplanetarium.org or call 312.922.STAR.

Shedd Aquarium On Memorial Day weekend, Shedd Aquarium offers three days of fun and festivities to celebrate its first 75 years and usher in the next. From the Australian lungfish acquired for the 1933 World's Fair to egg cases holding wiggly zebra shark babies in *Wild Reef,* Shedd has the largest and most diverse collection of animals of any aquarium in the world. For celebration information, visit www.sheddaquarium.org.

Fossil Plants a Link to Measuring Ancient Land Elevations

Greg Borzo, Media Manager, Scientific Affairs

One stomata, two stomata, three stomata, four. Jennifer McElwain, PhD, associate curator of paleobotany, has developed a novel way to determine ancient land elevations. While not quite as simple as the children's chant, "One Potato, Two Potato," it does involve counting the stomata, tiny pores on tree leaves that absorb carbon dioxide (CO_2) for photosynthesis, of living and fossilized leaves. The method will help geologists answer confounding questions about the rise and fall of mountain ranges.

Surface of a California black oak leaf magnified 400 times showing epidermal cells and stomata.

JENNIFER MCELWA

When you step into sand, everything around your footprint changes—bubbling up, spreading out and caving in. The Earth does the same thing over geologic time as continents shift: It's constantly changing. Knowing how high mountains and plateaus were in the past will help scientists study the evolution of species and how our climate system developed.

"Understanding the past elevation of land surfaces, also known as paleoelevation, has been one of geology's Holy Grails," said Dr. McElwain, the sole author of the research, which was funded by the National Science Foundation and published in the December 2004 issue of *Geology*.

Many existing methods to measure ancient elevations are inherently sensitive to climate, which changes unpredictably, or can only be applied to certain areas. This limits geologists' ability to globally test the links among tectonic uplift, carbon cycles and climatic cooling through the Cenozoic (65 million years to the present).

However, Dr. McElwain's technique, in which she counts the stomata on leaves dating back 65 million years, is the first paleobotanical method that works globally and is independent of long-term climate change. "The new method will help us understand the rate at which some of the Earth's most important mountains have uplifted," she said. "It will also show how the process of mountain building influenced climatic patterns, as well as plant and animal evolution."

Anyone who has climbed a mountain knows that the air gets "thinner" as you ascend. As with oxygen, CO_2 decreases at higher elevations. Therefore, the higher the altitude, the more the leaf compensates by increasing its number of stomata per square inch to absorb needed gases. By simply counting the number of fossil stomata, Dr. McElwain can estimate how much CO_2 was in the air when the fossil leaf developed. From that, she can estimate the elevation at which the fossil plant once lived.

A small dried California black oak leaf collected with permission from Mount Star King in Yosemite National Park at an elevation of about 7,000 feet.

JOHN WEINSTEIN/GEO66408 10D1

Dr. McElwain used historical and modern collections of California black oak (*Quercus kelloggii*), which has a long fossil record. Unlike most trees, this one grows at an unusually wide range of elevations, from near sea level to 2,440 meters (8,000 feet). In 2002 she and a team of graduate students collected leaves from more than 160 different populations of California black oak spanning the entire length and breadth of California. The historical leaves were collected in the 1930s and stored within herbaria of The Field Museum and the University of California, Berkeley.

This new method of estimating land elevation has an error of about 300 meters (980 feet), and sometimes as low as 100 meters (330 feet). This is a much lower error rate than those of existing paleoelevation methods, which are subjected to average errors of 450 meters (1,456 feet). The new method can be used for any plant species that is abundant across a broad range of altitudes and is well represented in the fossil record.

High mountains and plateaus can prevent wildlife from migrating and dispersing, which can result in plant and animal populations becoming isolated on opposite sides of mountain chains and adapting in different ways. Therefore, knowing exactly when today's mountains reached their current elevations is relevant to understanding plant and animal evolution.

In addition, high mountains and large plateaus (such as those in Tibet and Colorado) influence patterns of atmospheric circulation. Because this new method is independent of climate variations—which are impossible to predict, unlike changes in CO_2—it will allow scientists to identify the impact of elevation on global climate patterns.

This research also highlights the importance of museum collections, Dr. McElwain noted. "You never know what information is locked up in specimens or artifacts kept at a natural history museum like ours until someone develops a new method, tool or technology to draw out those secrets."

Dr. McElwain would like to apply the method to fossil leaves of other tree species. Ultimately it could be utilized to more precisely answer one of geology's biggest questions—how and when the Himalayas emerged, which are thought to have had a major impact on Earth's climate. Until recently, there was no way of testing this. ITF



A 15-million-year-old fossil California black oak leaf, on loan from the Paleontological Museum Berkeley, surrounded by leaves collected in California in 2002.

JOHN WEINSTEIN/GEO86406.01D1

The Vulgar Mammal

Amy E. Cranch, Editor

Two long digits of a peculiar fossil mammal from southwestern Wyoming's Green River Formation stood out as if the animal were giving its modern viewers the proverbial finger. Not really, of course, but this unusual feature did catch the attention of two Field Museum scientists, who together have brought some closure to where this archaic mammal group sat on the evolutionary tree.

Vice President of Collections and Research Lance Grande, PhD, has been studying fossil fishes from the Green River for 25 years. Whereas most sites produce only fragments of the past, whole plants and animals are found here, offering a startlingly detailed view of an extinct tropical lake community that prospered some 52 million years ago during the early Eocene.



JOHN WEINSTEIN/LGG990.03D

Apatemys chardini *used its elongated fingers to extract larvae from tunnels in wood.*

Having been told that the animal was a primate—one of the few mammals discovered here—Dr. Grande invited Field Museum Provost Robert Martin, PhD, an expert in primate evolution, to review it. Dr. Martin recognized immediately that it was not a primate: It has rodent-like teeth and a few superficially primate-like features, but does not fit into any modern group. He checked a reference book on a slightly younger Eocene site in Messel, Germany, and found a nearly identical specimen from the family Apatemyidae, which died out and left no close modern relatives. The European specimen has two elongated fingers on each hand, and preparation of the Green River specimen revealed the same feature.

Scientists have known for more than a century that apatemyids existed in North America and Europe, but evidence was initially limited to teeth and jaw fragments. Dr. Wighart von Koenigswald described the first near-complete skeleton from Messel in 1979, *Heterohyus nanus*. The Wyoming specimen, *Apatemys chardini,* is the most complete skeleton found to date in North America, bringing the total number of skeletons known in the world to five. Drs. Martin and Grande asked Dr. von Koenigswald to take a lead in describing *A. chardini*.

A. chardini is preserved in three dimensions, revealing morphological details that are not preserved in the compressed skeletons of its German relative. The *Apatemys* skeleton's posture suggests the animal drowned. Many characteristics indicate that it was arboreal, including specialized teeth for gnawing wood, and limbs and extremities adapted for climbing, clinging and leaping. We can also see a well-preserved baculum, a tiny bone presumably used to support the penis during insertion that most modern mammals have lost.

Like the aye-aye, an unusual lemur from Madagascar, and the striped opossum, a marsupial found in New Guinea and northeastern Australia, apatemyids probably extracted wood-boring larvae from bark and crevices. This dietary adaptation is reserved for woodpeckers today, but since woodpeckers are absent from Madagascar and Australasia and did not yet exist at the time of apatemyids, these mammals all evolved to fill that vacant ecological niche.

The Wyoming fossil does not shed light on the origin of apatemyids or their relationship to other placental mammals, but it does help scientists interpret how they were related to one another and distributed throughout North America and Europe. *A. chardini* is also an excellent example of what close cooperation between amateur and professional paleontologists can produce. Jim Walker, a commercial fossil collector, discovered the specimen and generously lent it to Drs. Grande and Martin for more than a year, allowing them to deposit a cast in The Field Museum's collections.

A. chardini showcases a happy scientific accident—when a fish specialist and primate specialist come together to describe an extinct animal that is neither fish nor primate. Perhaps its long fingers weren't a vulgar gesture at all, but a beckoning to research one more evolutionary question among the unanswered millions. ITF

The World is Just Enough for Lichens

H. Thorsten Lumbsch, PhD, Assistant Curator, and Nora Wirtz, Graduate Student, Department of Botany
Images by Nora Wirtz

The only way to get any sleep in the biting cold, with stormy winds blasting over the coast, was to have a sip of whisky. Fortunately my Austrian colleague brought a small bottle with him that gave us the warming respite we needed as we camped for a week in the harsh Antarctic, surrounded by nothing but penguins, elephant seals, mosses and lichens.

Byers Peninsula is one of the largest ice-free areas on the Antarctic's South Shetland Islands. While many lichens are distributed around the world, we were searching for *Usnea sphacelata,* a tough species that looks like an old man's beard and grows on bare rocks in Antarctica, the high mountains of the Peruvian Andes, the Arctic and even atop Mt. Rainier in Washington. Because of our interest in lichen systematics and evolution, this project compares the Antarctic species with those in the northern polar region and the Andes, which have a similar unforgiving climate.

Lichens are natural cooperatives comprised of a fungus that grows in close association with algae and/or cyanobacteria (formerly called blue-green algae). Some ground lichens grow in tangles that help alleviate wind and water erosion in weak soil. The cyanobacteria "fix" nitrogen gas in the air so that it can be utilized as a nutrient. Caribou and reindeer rely on lichens as a major food source, and birds and insects make them their home. Even humans use lichens as a dye, medicine and food. Lichens also absorb whatever is in the air, often disappearing when they become too vulnerable to pollution.

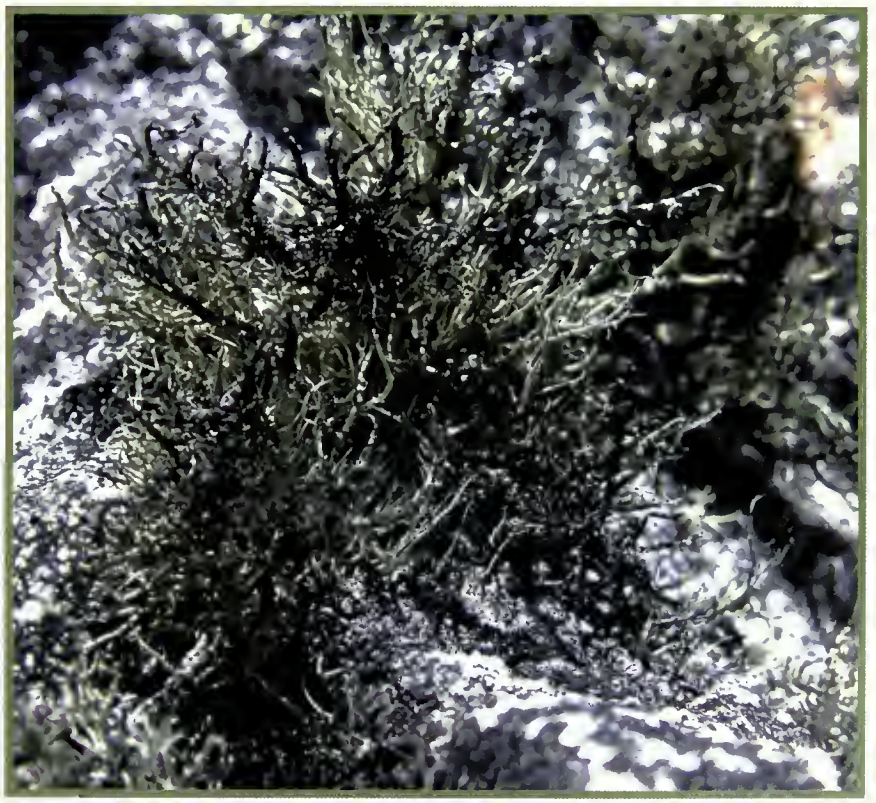
Fewer scientists study lichens compared to other plant groups. There are uncountable undiscovered species, and much existing data is based on erroneous morphological comparisons. The sensitive symbiotic relationship of lichens is almost impossible to cultivate in a laboratory, especially since they grow less than a millimeter a year and live for hundreds to thousands of years. This makes collections-based and molecular research necessary to upgrading our knowledge. We used the Pritzker Laboratory for Molecular Systematics to understand how the "old man's beard" literally grows at opposite ends of the Earth, choosing this sizable bush-like species because it's easy to recognize and is allegedly well known.

However, the DNA data that Nora Wirtz has collected showed us how wrong we were. Scientists have thought that there was only one species at both poles, but we found that we were working with four, some of which we will describe as new. Subsequent examination proved that subtle differences in these organisms' morphology and chemistry were previously neglected. Their geographic distribution is no less interesting: Two species occur in Antarctica, the high Andes and the northern hemisphere, while the other two were only collected in Antarctica and the high Andes. The data also suggest that the whole group originated in the southern hemisphere, and two made their way northward through the mountains of the Americas.

Our last fieldtrip to Peru, which was funded by The Women's Board and organized closely with the Natural History Museum in Lima, Peru, greatly improved our knowledge of the Andes' role in distributing these lichens. It also enhanced our collections, which previously contained mostly North American specimens and have more than doubled in the past two years since the 1950s. Dr. Thorsten Lumbsch alone has helped describe more than 80 new species, including many crustose lichens, which form crusts that are rigidly affixed to whatever they grow on. Each step in understanding lichens either revises what's known or adds to what's not. ITF

Mt. Huarapasca (17,000 feet), Cordillera Blanca, Peru.

Usnea acanthella, *a shrubby beard lichen in the Peruvian Andes.*



The Weasel in the Classroom

Amy E. Cranch, Editor

When a local schoolteacher showed her students a New York weasel—a ferocious creature that attacks everything it can—one boy was so captivated that he corralled his mother into searching for it at The Field Museum. They eventually found the Harris Educational Loan Center, which had lent the specimen to the teacher. With great aplomb, he explained what he knew as if he'd witnessed the weasel in his own backyard.

For 94 years, the center has offered Museum treasures to classrooms, libraries and other youth groups throughout Chicago and beyond. Revolutionary when it started, the program is still rare for its size and depth. Last year almost 300,000 children benefited from Harris Loan materials.

Resources include 900 Exhibit Cases depicting scenes from the natural world; portable Experience Boxes on more than 70 topics that contain educator guides, objects and activities; multimedia and print materials; and large-scale replicas, including a full-size reproduction of a *Tyrannosaurus rex* head. The variety of themes—from prehistoric creatures to urban wildlife, ancient Egypt to Latin American food, and seeds to volcanoes—enables teachers to incorporate real cultural artifacts and botanical and zoological specimens into their lesson plans, an even more powerful experience for students when combined with a fieldtrip to the Museum.



DOUG MCGOLDRICK

A teacher shares Harris Loan materials with her class.

"Harris Loan appeals to educators in so many ways," said Mara Cosillo-Starr, resource center administrator. "Borrowing is free, most importantly, and every activity meets Illinois learning standards."

Equally vital is that Cosillo-Starr and her associate, Moses Rasberry, are more than registrars. Educators look to them as curriculum advisors, fieldtrip planners and friends. It's not unusual for a teacher's quick stop for materials to turn into a comforting chat about the challenges in the classroom.

While Harris Loan meets educators' needs for experiential, accessible materials, the program has not rested on its laurels. The entire collection was recently catalogued, photographed and posted online. Teachers can now register for the program, search the holdings and reserve materials through our website.

Several boxes are being revitalized. "I look at each box with critical eyes and ask, 'If I were a teacher, could I use this?'" said Cosillo-Starr. "Then I put in as much as I can imagine. Sometimes I create or expand a box because it's a cool topic and I know that teachers will use it."

For example, inspired by the Museum's beloved dioramas, Cosillo-Starr developed a case in which students see the difference between real and artificial specimens and learn about the painstaking techniques used to construct lifelike nature scenes. In addition, she added a teacher's guide, activities, a microscope and slides, and more specimens to the original tree box.

"We have engaged actual classroom teachers to review our materials," said Elizabeth Babcock, PhD, teacher and student programs director. "This is exciting because it ensures a high degree of usefulness." A new box on renewable energy was created based on teacher requests that guides children in building model hydro and wind stations.

Other efforts include basic maintenance—especially critical with so many little hands using the materials—and building the community of users. A new website feature enables teachers to post lesson plans they've created that incorporate Harris materials. We will also establish offsite distribution centers in 2006 for educators who do not live or work near the Museum.

Every attempt to expand the Harris Educational Loan Center balances preserving its historical significance as one of the largest collections of its kind with using the latest scientific theories and pedagogical techniques. For the little boy, reading about the New York weasel might not have stirred the same enthusiasm as did touching one and taking an extra trip to see it again. ITF

Any educator can visit www.fieldmuseum.org/harrisloan to register or reserve materials.

YOUR GUIDE TO THE FIELD

Calendar of Events for Spring 2005 March–May

Inside: Exhibitions Festivals Family Programs Adult Programs

Programs at a Glance

Details inside!

Family Programs

Dino Bee *3/19*
Sue's 5th Birthday *5/14–17*
Mazon Creek Fieldtrip *3/19 & 4/16*
The Two of Us *4/12–5/31*
Family Overnights *3/25 & 4/1*
Behind the Scenes *5/6*
Cultural Connections *March–May*

Adult Programs

Egyptian Magic V begins *3/29*
Hieroglyphs and History begins *3/30*
The Greatest Good Film Screening *4/2*
Design Competition and Panel Discussion *4/16*
Of Diamonds and Diplomats Performances *4/23, 4/24, 4/30 & 5/1*
Volo Bog Fieldtrip *4/30*
Behind the Scenes *5/7*

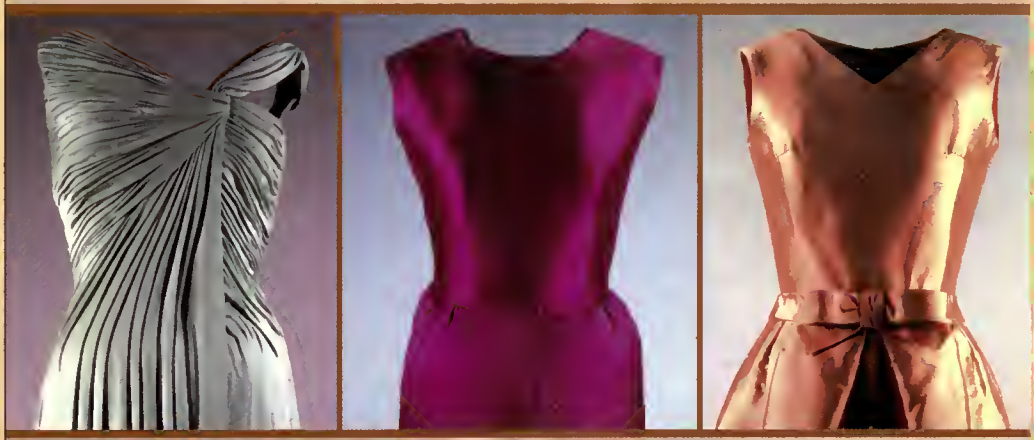
National Geographic Live! Series

Solo Across the Poles *3/8*
Inside Secret Worlds *3/22*
Jungles *4/12 — SOLD OUT*
Tracing the Journey of Man *5/10 — SOLD OUT*

Final Days!

JACQUELINE KENNEDY: THE WHITE HOUSE YEARS

Selections from the
JOHN F. KENNEDY LIBRARY AND MUSEUM



©JFK LIBRARY FOUNDATION

Through May 8

Revisit an era of style and grace to explore how Jacqueline Kennedy's taste, intelligence and charisma influenced American statesmanship and diplomacy. More than 70 garments, along with photographs, documents and film clips, reveal how the former first lady carefully shaped her image to reflect the vigor, ideals and internationalism of her husband's administration.

This exhibition was organized by The John F. Kennedy Library and Museum and The Metropolitan Museum of Art.

This exhibition is made possible through the generous support of The Grainger Foundation and Marshall Field's.

Lecture

Inside the White House



COURTESY HUGH SIDEY

Hugh Sidey, Washington Contributing Editor, Time *Magazine*

Laced with humor, Hugh Sidey's presentation will offer rare insight on the White House from an insider's perspective. Having personally known every president since Dwight Eisenhower, Sidey will examine the Kennedy Administration—from the Vienna Summit to that fateful day in Dallas—and the contemporary history of America's most famous home.

Wednesday, March 30, 7pm
Reserved seats: $24, members $22
General admission: $20, members $18, students/educators $15 (limited quantity)

The Field Museum

General Museum Information: 312.922.9410
Family and Adult Program Tickets and Information: 312.665.7400

Please note: Refunds will be issued by Field Museum staff, minus a $10 processing fee, for group and family overnights only. No refunds or exchanges are permitted for any other programs. Fees for programs cancelled by The Field Museum will be refunded in full.

Kickoff to a Year of Dinosaur Activities

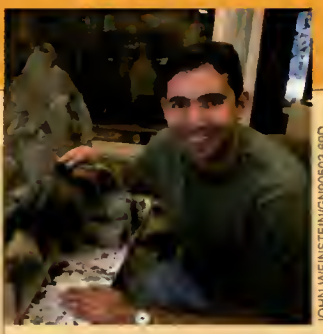
Saturday, March 19

All activities are free with Museum admission.

Dino Bee

Join The Field Museum and *Chicago Parent* magazine for the first-ever Dino Bee! You'll witness 50 third-graders—all aspiring dinosaur experts—face off as they perfect their knowledge of dinosaur facts and figures.

11am



JOHN WEINSTEIN/GN90603 69D

Sue School

Jim Holstein, TFM Geology Dept.

Sharpen your pencil and get ready to learn about paleontology! Families are invited to talk to Field staff about the science of Sue, the most famous dinosaur in the world.

10am and 1pm



GEORGE PAPADAKIS/GN89608 6C

Additional Dino Doings

Treks With a T. Rex

Foundation Theatre Group

Tex the *T. rex* and his paleontologist guide, Dr. Jonas, need help! Join this cast of colorful characters and their dinosaur friends from all over the world as they try to figure out what *T. rex* did with its tiny arms.

Performance: 11am

Also look for colossal dinosaur puppets roaming the Museum greeting dinosaur enthusiasts of all ages!

1pm–3pm

Special Dinosaur Exhibitions

Dinosaur Dynasty: Discoveries from China

May 27, 2005–April 23, 2006

Meet dinosaurs you've never seen before, when *T. rex* Sue's friends come to visit—all the way from China!

Sue Discovery Dig

May 27–September 5, 2005

Join one of the most spectacular dinosaur expeditions this side of China—and help unearth a full-size replica of our famous *T. rex,* Sue!

Sue's 5! Join us for the four-day party.

Check out an array of free programs—including performances, activities and the chance to meet Museum scientists—as part of Sue's 5th birthday celebration.

Saturday–Tuesday, May 14–17
All activities are free with Museum admission.

Treks With a T. Rex

Foundation Theatre Group
Performance: 11am each day



GEORGE PAPADAKIS/GN90149C



RON TESTA/GEO84989C

Scientists at the Field

Presenters include Brian Sidlauskas, TFM Fishes Division, and Lisa Bergwall, TFM Geology Dept.

Meet Field Museum scientists, learn about their personal research interests and see rarely displayed specimens from our collections, the foundation of nearly every Museum endeavor.

Saturday and Sunday, 11am–2pm

Additional Dino Doings

Stop by Dino Zone on the upper level or a hands-on interpretive station to learn more about dinosaurs from around the world. Make your own dinosaur mask, investigate a model of Sue's claw, handle real fossils or locate dinosaur discovery sites on our Asia Mega Map! Later, join Story Time to hear a reading of *A Field Mouse and a Dinosaur Named Sue,* and make an art project to take home.

Dino Zone: Saturday and Sunday, 10:30am–4pm
Monday and Tuesday, 10am–2pm
Story Time: 1:30pm each day

Sneaky Sea Creature

See how scientists are solving a 150-year-old puzzle regarding the unusually long necks of many ancient reptiles known as protorosaurs. A newly discovered fossil coming to the Field may have solved the mystery for one particular species. Find out how the strange neck of the 230-million-year-old *Dinocephalosaurus orientalis,* "terrible-headed lizard from the Orient," enabled it to quietly sneak up on elusive fish and squid and suck them in as food.

March 19–June 17, 2005



INSTITUTE OF VERTEBRATE PALEONTOLOGY AND PALEOANTHROPOLOGY, BEIJING

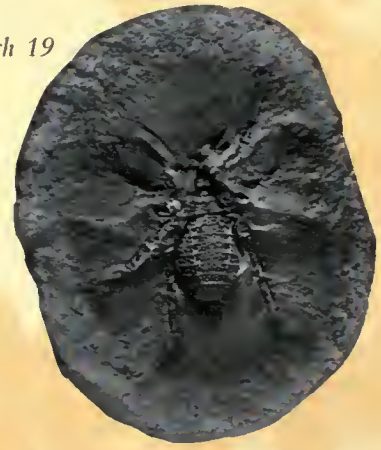
Family Programs

Fieldtrip

Family Fossil Hunt at Mazon Creek

Do you like to hunt fossils? Visit the world-famous Mazon Creek site to discover what Illinois was like more than 300 million years ago! Plan on a quarter-mile walk to fossil locations. Designed for families with children 8–17 years old.

Choose either Saturday, March 19 or April 16, 8am–3pm
$40, members $30



Workshop

The Two of Us



Join us in this eight-week excursion through the wonders of The Field Museum! You and your little one will travel the Museum's exhibition halls, sing songs, hear stories, touch objects, make art projects and enjoy snacks while exploring natural and cultural history, from bats and insects to games and art forms.

Families with children ages 3–5
Tuesdays, April 12–May 31
10–11:30am or 1:30–3pm (Choose one time.)
$95, members $80
For each child, one adult attends at no charge.

Adult Programs

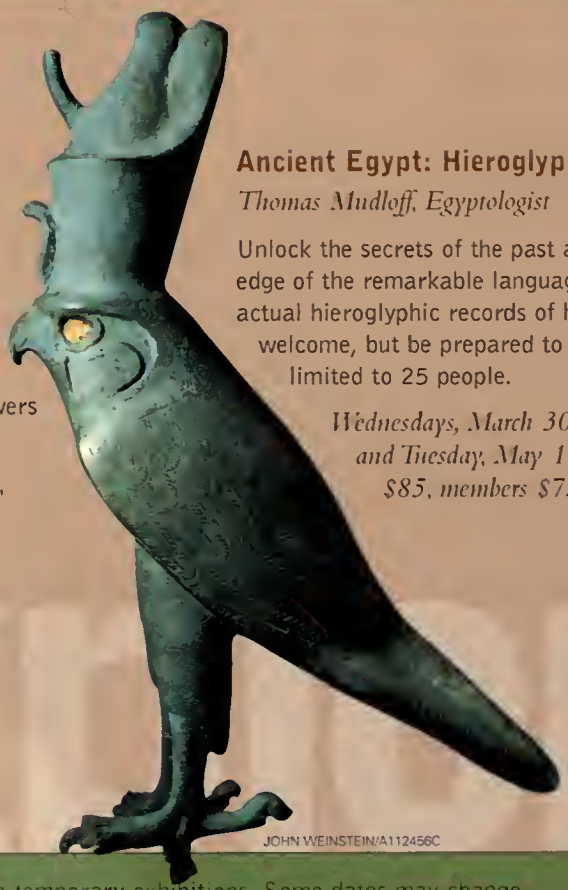
Courses

Ancient Egypt: Egyptian Magic V

Thomas Mudloff, Egyptologist

Examine the mystique of the Egyptian goddesses Hathor and Isis through the rich histories their temples have left behind. You'll see how both temples and their well-preserved shrines, crypts and monuments provide clues to the fascinating cult of followers each goddess held. Beginners welcome.

Tuesdays, March 29, April 5, 12, 19 and 26, and Monday, May 16, 6–8:30pm
$85, members $72



JOHN WEINSTEIN/A112456C

Ancient Egypt: Hieroglyphs and History

Thomas Mudloff, Egyptologist

Unlock the secrets of the past as you develop a basic knowledge of the remarkable language of ancient Egypt. Explore actual hieroglyphic records of historic events. Beginners welcome, but be prepared to do some homework! Class limited to 25 people.

Wednesdays, March 30, April 6, 13, 20 and 27, and Tuesday, May 17, 6–8:30pm
$85, members $72

Exhibitions

Below is a calendar of current and upcoming temporary exhibitions. Some dates may change. Visit our website at www.fieldmuseum.org or call 312.922.9410 as the date of your visit nears.

Jungles: Photographs by Frans Lanting
May 27, 2005–January 1, 2006

Sue Discovery Dig
May 27–September 5, 2005

Dinosaur Dynasty: Discoveries from China
May 27, 2005–April 23, 2006

Family Overnights

Dozin' With the Dinos

Sue the *T. rex* is having a sleepover! Join us for a night of workshops, tours and performances. Explore ancient Egypt by flashlight, prowl an African savannah with man-eating lions and stroll through the Royal Palace in Bamun, Africa. Then spread your sleeping bag amid some of our most popular exhibitions. The event includes an evening snack and light breakfast.



JOHN WEINSTEIN/GN90488.58 D

Families with children ages 6–12
5:45pm on Friday until 9am on Saturday
Choose from March 25 or April 1
$47, members $40

Behind the Scenes

Discover the Treasures of the Americas

Maxine McBrinn, TFM Anthropology Dept.

Look closely at the extraordinary artifacts in the *Treasures of the Americas* exhibition, and learn why these pieces were chosen from the Museum's extensive collections to represent the exquisite art of the Americas. Meet an anthropologist who will talk about their fascinating history and the unusual skill and care used to create these ceremonial and daily objects.



RON TESTA/A110024C

Choose from two sessions.
Families with children ages 8–12: *Friday, May 6, 6pm*
Adults: *Saturday, May 7, 10am*
$15, members $12

Film Screening

The Greatest Good

Journey across breathtaking landscapes and learn about the origins of the environmental conservation movement in America. This documentary explores the choices we have made in the last 100 years about land use, examining the American forest as it has evolved alongside our changing social values.

Saturday, April 2, 2pm
(Not rated. Running time: 2 hrs.)
Free with Museum admission



COURTESY OF THE U.S. FOREST SERVICE

Design Competition and Panel Discussion

Design Innovations in Manufactured Housing



See first-hand how the next generation of designers envisions the future of manufactured housing. Experts will critique the plans of students from the University of Illinois at Chicago-City Design Center and the Design Studio. Then, architects who contributed to the *Design Innovations in Manufactured Housing* exhibition will discuss housing possibilities for Chicago's underserved neighborhoods.

Saturday, April 16
Competition: 10am
Discussion: 2pm
$12, members $8, UIC and IIT students free with school ID

Arctic National Wildlife Refuge: Seasons of Life and Land
Through May 8, 2005

Jacqueline Kennedy: The White House Years—Selections from the John F. Kennedy Library and Museum
Through May 8, 2005

Treasures of the Americas: Selections From the Anthropology Collections of The Field Museum
Through May 30, 2005

ltural Connections

Experience Chicago's cultural diversity through this year's theme, "Narratives: Doorways to Our Communities." Learn how folktales, rare documents and murals play powerful roles in passing on cultural values, revealing community history and helping residents address current social issues. Call 312.665.7474 for more information, or visit www.fieldmuseum.org/ccuc.

March 12: Telling Tales to Teach

April 13 and 14: Treasures from the Trunk—Highlights from Our Immigration History

May 25 and 26: From Wall to Wall—Counter-Narratives in Chicago

Cultural Connections has received generous support from: Searle Funds at The Chicago Community Trust, The Joyce Foundation, Kraft Foods, The Women's Board of The Field Museum, Lloyd A. Fry Foundation, Bank One Robert Morris College, and the Chicago Public Schools' Office of Language and Cultural Education.



JOHN WEINSTEIN NO. 59949.341

Performance



COURTESY OF LIVE BAIT THEATER

Of Diamonds and Diplomats

A Staged Reading by Live Bait Theater

Follow this humorous trek through Jacqueline Kennedy's social life with Chicago's acclaimed Live Bait Theater, based on etiquette expert Letitia Baldrige's memoirs. Tag along with Tish and the first lady as they redecorate the Executive Mansion, throw some swell soirees and lose their luggage on three continents!

Saturdays and Sundays, April 23, 24, 30 and May 1, 2pm
$16, students/educators $14, members $12

Fieldtrip

Unique Landscapes: Volo Bog and Glacier Park

Visit one of Chicagoland's only true bogs to investigate the ecosystems and plant life that thrive there. You'll see evidence of what the last Ice Age left behind and learn about how our most common landforms were created. This is an adults-only trip, and space is limited. Please register by Monday, April 25.

Saturday, April 30, 8am–3pm
$70, members $60



COURTESY OF ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Design Innovations in Manufactured Housing
Through January 16, 2006

Explore unknown worlds with

Join us for the fourth adventure-filled season of presentations by world-renowned photographers, explorers and scientists.

NATIONAL GEOGRAPHIC LIVE!



BØRGE OUSLAND

Solo Across the Poles

Børge Ousland, Polar Explorer

Strap on your skis and get ready for a frigid adventure across the North Pole. You'll see how Ousland crossed 1,240 miles of ice floes and seawater, successfully eluded arctic wolves and polar bears and survived the solitude of an 82-day solo expedition.

Tuesday, March 8, 7:30pm

Inside Secret Worlds

Jodi Cobb, Photographer

Gain access to some of the world's most secretive societies—such as Japanese geishas and the underworld trade in human beings—with this seasoned photographer. Cobb's ability to access "closed" subcultures has informed some of *National Geographic* magazine's most memorable stories.

Tuesday, March 22, 7:30pm



JODI COBB

Jungles

Frans Lanting, Photographer

Be inspired by photos and stories of some of Earth's most spectacular jungles, from the lowl[SOLD OUT] the Congo to the cloud forests of the Andes [SOLD OUT], on view in the upcoming *Jungles* exhibition. [SOLD OUT] continues to focus on the importance of conservation and has increased worldwide awareness of endangered ecological treasures.

Tuesday, April 12, 7:30pm



FRANS LANTING

Tracing the Journey of Man

Spencer Wells, Geneticist and Anthropologist

Watch your family [SOLD OUT] Dr. Wells takes you on a global tour of prehistory using genetic markers as his guide.

Tuesday, May 10, 7:30pm



©MARK READ

Ticket Information

Call 312.665.7400 or visit www.nationalgeographic.com/nglive to purchase tickets. A limited number will be available onsite the day of the event starting at 5:30pm, but we recommend reserving tickets in advance since these events sell out.

Individual Events—On Sale Now

Patron *(reserved seating): $30; TFM, NG and Geographic Society of Chicago members $28.*

General admission: *$24; TFM, NG and Geographic Society of Chicago members $22; students $15.*

Series Sponsor: The Field Associates—a dynamic, diverse group of young professionals dedicated to promoting awareness of The Field Museum's collections, research and public programs. For information on [illegible] call 312.665.7133 or visit www.fieldmuseum.org/fieldassociates.

Educational outreach activities related to the series are presented in collaboration with The Field Museum, the Geographic Society of Chicago and the Illinois Geographic Alliance.

See where natural and cultural beauty intersect.

Arctic National Wildlife Refuge: Seasons of Life and Land

Through May 8, 2005



©SUBHANKAR BANERJEE/WWW.WWBPHOTO.COM

Luminous photographs capture the fragile beauty of the Arctic National Wildlife Refuge in Alaska.

Arctic National Wildlife Refuge: Seasons of Life and Land is an exhibition of photography by Subhankar Banerjee designed and produced by the California Academy of Sciences, San Francisco, California.

Design Innovations in Manufactured Housing

Through January 16, 2006

Original models and drawings by noted architects and industrial designers offer creative solutions for pre-fabricated homes.

This exhibition was developed by the City Design Center, College of Architecture and the Arts, University of Illinois at Chicago, in collaboration with The Field Museum. The City Design Center, College of Architecture and the Arts, University of Illinois at Chicago received funds from the National Endowment for the Arts and the Graham Foundation for Advanced Studies in the Fine Arts to create this exhibition.

Treasures of the Americas: Selections From the Anthropology Collections of The Field Museum

Through May 30, 2005

Witness the exquisite craftsmanship and sophistication found within the Museum's extraordinary collections—from cultures as diverse as Arizona's living Apache to Ohio's ancient Hopewell.



K. CULBERT AGAILLAR/A105154C

Visitor Information





MIKE SIOREK

Getting Here: Field Museum visitors can park in Soldier Field's parking garage. Visit www.fieldmuseum.org for the latest information on parking lots/rates, free trolleys and public transit.

Hours: Last admission at 4pm. Please note the Museum closes at 5pm even when an evening educational program is scheduled. Visitors will be asked to leave at 5pm and can reenter 30 minutes before their event begins.

Admission and Tickets: Member passes can be reserved through the membership department (312.665.7705) or picked up at the membership services desk. For non-members, the gold pass, which includes general admission plus one special exhibition, ranges in price from $8 to $19, depending on your age category and whether you are a Chicago resident. Please bring your ID to receive the appropriate ticket price.

Tickets are available at the Museum's admission desks, or in advance via www.fieldmuseum.org or 866.FIELD.03. For all admission and ticket details, visit www.fieldmuseum.org.

Accessibility: Visitors using wheelchairs or strollers may be dropped off at the west entrance. Handicapped parking and wheelchairs are available on a first-come, first-served basis. Call 312.665.7400 to check on the accessibility of programs that take place outside of the Museum.

Information: 312.922.9410 or www.fieldmuseum.org

The Field Museum thanks the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District. In addition, Museum programs are partially supported by a City/Arts program grant from the City of Chicago Department of Cultural Affairs and the Illinois Arts Council, a state agency.

In accordance with Title IX of the Education Amendments Act of 1972, we do not discriminate on the basis of age in our programs or activities. Should you have any questions or concerns, please contact our Title IX Coordinator in the human resources department, 312.665.7272.

A Hi-tech Peek



COURTESY WILLIAM PESTLE

Left: Gazelle mummy with metal inclusions.

Center: Fake cat mummy.

Right: Mummy with preserved brain.

Swindling is not a modern practice. Digital X-rays of a 2,500-year-old Egyptian mummified cat from The Field Museum's collections revealed that it's actually a bundle of rags, probably sold to a mourner who thought it was an offering to the goddess Bastet.

This past December, the anthropology department was loaned a portable X-ray machine—more typically used in hospitals—that allowed researchers to see inside about 60 objects. Each one held pressing research questions and could test the equipment's applicability within a museum setting.

Magdalenian Girl, an Ice Age mummy from France, gained mythic fame in the 1920s when rumors circulated that a jealous lover had killed her with a poisoned arrowhead. While the X-rays haven't verified her cause of death, they show impacted molars associated with adult teeth problems. She probably died as an elder rather than a child or teenager.

Several animal mummies contained metal pieces that were likely inserted to make the animal appear more robust and lifelike. Artifacts from Kish, a 5,000-year-old site in Iraq, showed restoration and conservation treatments performed in the 1920s. Scientists could see the internal mechanisms that make 1,500-year-old Moche vessels from Peru whistle when fluid is decanted. Images taken through a wooden sarcophagus of a 3,000-year-old Egyptian mummy revealed preserved brain tissue, which was traditionally removed.

Whereas the Museum's older X-ray equipment is time-consuming and produces lower-quality images, the new machine works within seconds and generated nearly 400 images in just three days. They are currently being processed and reviewed for possible publication and display. The department is seeking funds to purchase the $250,000 machine for permanent use.

William Pestle, a collections manager in the anthropology department who specializes in human remains, chose this Scientist's Pick.

How to Study Animals in Habitats You've Never Seen



Janet R. Voight, PhD, Associate Curator, Department of Zoology

Wood from a continental forest that falls into a stream can sometimes float far out to sea. Seaweed, gooseneck barnacles and other animals colonize the floating mass, which eventually sinks under the weight of its growing cargo and water logging. The original inhabitants disappear on the way down, maybe eaten or killed by near-freezing temperatures. When the wood reaches the seafloor, animals that occur nowhere else begin occupying it, exploiting the shelter and energy it stores.

A digital still from Alvin *shows a spider crab and squat lobsters surrounding wood deployed two years earlier.*

Inset: Provanna macleani, *the gastropod found in 1997 that sparked Dr. Voight's interest in wood falls.*

The rarity of wood falls increases with distance from the shore. In the past decade I've had eight dives in *Alvin*, the only U.S. manned submersible, and nine cruises with four different Remotely Operated Vehicles (ROV), but I've never seen a natural wood fall on the seafloor. During a trawling cruise in 1997, however, we netted a small log that carried a type of snail previously known only from hydrothermal vents and cold seeps, both habitats rich in hydrogen sulfide, a pungent chemical. Biologists who specialize in vents question how species find them in the first place, but detecting hot, chemical-rich (and stinky) vent fluids seems easier to me than locating a piece of wood. These snails offered a tantalizing glimpse of wood-fall specialists, but because the trawl net likely scraped other animals off the log on the way up, a glimpse was all I had. To know which animals exist on wood falls required more carefully collected specimens.

The first steps

My proposal to the National Science Foundation (NSF) offered to get such specimens. Rather than trying to locate natural wood falls, I would generate my own, placing wood at depths below 2,200 meters (1.4 miles) and returning the two following years to collect it. With NSF funding and use of the ROV *Jason*, an unmanned robotic submersible, I put 18-inch-long lengths of wood in bags on the North Pacific Ocean floor during a three-week multi-disciplinary cruise in 2002.

With many scientists involved in that cruise and several days of work planned at each site, we deployed acoustic transponders deep under water to aid in navigation. While diving, the ROV queries the transponders, and each one answers with a characteristic sound frequency. Transponders that are farther from the ROV appear to answer more slowly; differences in the sounds' roundtrip travel times allow us to determine how far the ROV is from each transponder. Because we used the ship's Global Positioning System (GPS) to locate each transponder exactly at deployment, we could navigate the ROV pretty well and translate its position into latitude and longitude.

Working with my colleagues dramatically increased our efficiency, but imagine trying to explain to geochemists and geophysicists ("hard" scientists) that you are using incredibly expensive ship and ROV time—$40,000 a day—to put wood on the seafloor in hopes of finding it again to see what might have grown on it. I tried to smile at their little jokes as I put one piece of oak and one of fir into each mesh bag with a meter-long marker line, readying them for what might be a one-way trip.

There was no guarantee that I would find it or that animals would have colonized it. I only knew that we would not recover plants because there's no light below about 500 meters (0.3 miles) depth. I couldn't use signaling devices because batteries can't last for two years at seafloor temperatures of 2 C (36 F). Direct use of the GPS was impossible

because satellite signals don't go through water. And because ROV and submersible lights penetrate only about 10 feet through the water at the bottom of the ocean, we couldn't be off by more than that if we were to ever see the wood again. Every time we left a bag on the bottom, I felt a pang of doubt as my colleagues gleefully reminded me of the problems I would face later. During my first recovery cruise with the same science party and transponder system, we found all the wood we looked for, but the diversity of animals it carried was disappointing.

The make-or-break cruise

I had hoped my final recovery cruise this past September would be different; indeed it was. Instead of being a small part of a large science party, this time it was just me, my 14 handpicked scientists-colleagues, and, instead of an ROV, *Alvin*, a wonderful, time-tested tool. However, use of *Alvin* meant we had to use a different navigational system to relocate the wood. It takes six hours to deploy transponders, and my cruise was only long enough to get from site to site with one dive at each area. Therefore, I had to rely on the ship's high-tech GPS to determine where *Alvin* landed after its two-hour descent (through what can be strong currents) and how to get it within 10 feet of where we thought the wood was.

At each area, I was afraid that our navigation would be off by just enough—or, worse yet, by a mile—and we would completely miss the wood. My shipboard colleagues never quite understood my concerns, as we promptly found the wood on every dive. When I started working with submersibles, attempting to find 18-inch-long bags and a single marker line would have been so close to impossible as to be laughable. With the latest technology, however, we showed it could be done repeatedly.

A new species of Xyloplax *currently being described.*



TODD HANEY

Once *Alvin* located the wood, the pilot easily loaded the bags into the 35-pound lidded boxes I had commissioned to bring them to the surface. If the wood had ascended through the water column unprotected, its tiny colonists would have washed off. Opening the boxes on the ship's deck revealed diverse animals that are rarely collected. We made



MEG DALY

Left: This deployment was covered with flatworms, but few boring clams. Right: This deployment had no flatworms but so many clams boring into the wood that it was almost gone.

the world's third collection of a wood-fall specialist previously known only from off New Zealand and Bermuda; some consider the animals a new class—a taxonomic level as different from sea stars, common echinoderms (spiny-skinned invertebrates), as octopuses are from snails or bivalves. This new species of *Xyloplax* is now being described.

Wood-boring clams are thought to be integral to the wood-fall fauna. Although only one species was reported in the North Pacific Ocean, our collections contain what I think are at least six species—all unknown to science—in two genera, one of which was previously known only from the Atlantic Ocean. One of my reference books says flatworms do not exist in the deep sea, but they were so abundant at one site that we collected hundreds of them. I think they were feasting on newly settled clams because where the flatworms were absent, there were so many wood-boring clams that the wood was falling apart.

We collected animals from as deep as 3,227 meters (2 miles) under the surface and as far as 255 nautical miles from land—and the nearest tree. Even though I've never seen a natural wood fall, the animals must have been there, waiting, all the time. Discovering their diversity is the first step in understanding how they evolved to occupy this habitat. Although life on Earth is inherently fragile, my research in the deep sea constantly reveals surprisingly precarious existences into which animals have evolved. ITF

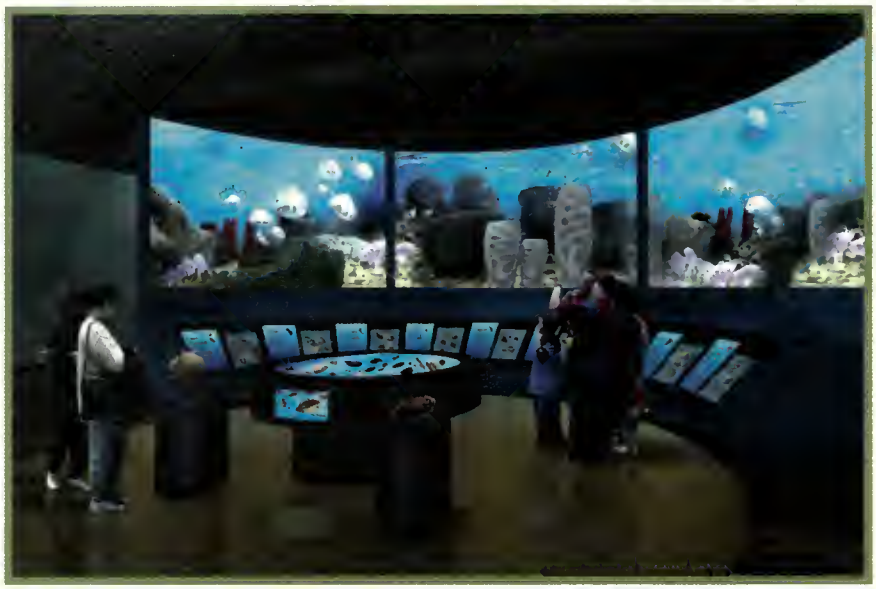
Go to www.fieldmuseum.org/expeditions, then "Archived Expeditions," for personal dispatches from Dr. Voight's research in the Pacific Ocean.

Revitalizing Life Over Time: A New Look for a Very Old Topic

Todd J. Tubutis, Senior Project Manager, Exhibitions

"Where are the dinosaurs?" You may have asked this on a recent visit to The Field Museum when you discovered that *Life Over Time* is now closed, and then wondered why.

Life Over Time, which told the story of evolution since life's beginnings 4.5 billion years ago, opened in two phases between 1993 and 1994. It quickly became one of the Museum's most popular permanent exhibitions, attracting nearly 1.5 million visitors over its first three years. The exhibition's hands-on opportunities were a tremendous lure, in addition to its dinosaurs, but many interactive elements frequently broke down. Exhibitions staff ultimately had to remove some without replacing them, and *Life Over Time's* maintenance needs soon exceeded routine upkeep.



This dramatic animated projection shows a thriving shallow marine environment of the Cambrian Period (490–543 million years ago).

Facing this practical dilemma, the Museum evaluated the exhibition in 2001. While its original messages were still timely—that the history of life on Earth is vast, that every living thing is connected through evolution, and that evolution is an ongoing process—many elements failed to communicate these messages to our visitors.

The evaluation also revealed just how much the evolutionary sciences had grown since *Life Over Time* opened, including at The Field Museum, where many scientists are at the forefront of researching the complex and lengthy history of life on Earth. *Life Over Time* needed to incorporate new scientific theories and discoveries.

In addition, acquiring Sue the *T. rex* in 1997 had a significant impact. By studying this fossil, the most complete *T. rex* specimen yet discovered, scientists now know how fast *Tyrannosaurus rex* grew, how old Sue was and even how well the *T. rex* could smell! We also know more about the Cretaceous world in which Sue lived from the fossils found at the same site.

As a result of this evaluation, the Museum committed to a full-scale renovation of *Life Over Time* with four overarching goals: strengthen the exhibition's interpretive focus on evolution with a well-paced journey through time; highlight the Museum's spectacular fossil collections to position The Field Museum as *the* place for dinosaurs in Chicago; create a link to and context for Sue, which will remain on display in Stanley Field Hall; and make the exhibition flexible to accommodate current scientific information, debates and new discoveries.

Over the past three and a half years, the exhibitions department has created a stunning new design. Here are some highlights to come:

- Nearly 750 additional specimens, including an 18-foot-long juvenile sauropod dinosaur, *Rapetosaurus Krausei,* that has never been displayed;
- Eight "Scientist Stops" featuring Field Museum scientists talking about their research, and six interactive stations on "Evolution Essentials" that explain how evolution works and how we know;
- An expanded section on hominid evolution featuring a full-scale, three-dimensional reconstruction of "Lucy," a 3.18 million-year-old *Australopithecus afarensis;*
- 24 cleaned and restored Charles R. Knight murals, originally painted for the Museum in the 1920s;
- An expanded dinosaur hall with a dramatic new entrance and a kid-friendly "dino" activity area.

Life Over Time closed in March 2004 to get ready for this spectacular new permanent exhibition. Look for more exciting details—including a new title—as we prepare to unveil the exhibition in March 2006. In the meantime, come see *Dinosaur Dynasty: Discoveries from China,* opening on May 27, or visit the Dino Zone on the upper level by the McDonald's Fossil Prep Lab.

The renovation of *Life Over Time* is made possible, in part, with support from the Illinois Department of Commerce and Economic Opportunity, the U.S. Department of Housing and Urban Development, the U.S. Department of Energy and the U.S. Department of Education.

An Evening of Style and Grace

With the graceful columns of Stanley Field Hall providing an elegant backdrop, more than 1,200 guests celebrated the opening of the *Jacqueline Kennedy: The White House Years* exhibition at The Women's Board gala, An Evening of Style and Grace.

Chaired by Maureen Dwyer Smith and co-chaired by Mrs. David W. Grainger, the event evoked a Kennedy-era state dinner with special guests that included Caroline Kennedy and her husband, Edwin Schlossberg, Senator and Mrs. Edward M. Kennedy, Governor and Mrs. Rod Blagojevich, and Senator and Mrs. Barack Obama.

"It was one of those nights when everything came together perfectly—the flowers, the food and especially the people," said Smith. "I have never been so proud of our Women's Board and the staff of the Museum. I can't thank everyone enough for their support of The Field Museum!"

The event raised more than $1 million to support The Field Museum. The Women's Board gratefully acknowledges the gala's lead sponsor, Marshall Field's, and additional sponsors Abbott Laboratories, Mr. and Mrs. John V. Crowe, Mr. and Mrs. Marshall Field V, Illinois Tool Works Inc., Mr. and Mrs. Fred A. Krehbiel, Northern Trust, Anne and Chris Reyes/Reyes Holdings, LLC, and Sara Lee Corporation.


CHERI EISENBERG


CHERI EISENBERG

Left: Mr. and Mrs. David W. Grainger

Right: Edward Byron Smith, Jr., Maureen Dwyer Smith, Caroline Kennedy and Edwin Schlossberg

This exhibition was organized by The John F. Kennedy Library and Museum and The Metropolitan Museum of Art.

This exhibition is made possible through the generous support of The Grainger Foundation and Marshall Field's.

Tsunami Remembered

On Dec. 26, 2004, an underwater earthquake in the Indian Ocean unleashed a devastating tsunami that pummeled 12 countries and killed at least 175,000 people. The whole world held its breath in despair and disbelief as the news unfolded, each one of us affected by the tragedy in deeply personal ways.

The Field Museum has culled exquisite artifacts from the anthropology collections that came from cultures in the tsunami's path. They are on public view in the Regenstein Laboratory, which is inside the *Traveling the Pacific* exhibition.

The spectacular objects include an exquisitely beaded pouch and belt from Penang, Malaysia (1), and a dog-like "scare devil" sculpture from the Nicobar Islands in India. An ornate temple lamp of a bird carrying a heavenly musician on its back came from the Tamils, one of the oldest cultures of South Asia. A chief from Nias, Indonesia, once wore the dramatic iron cuirass (body armor) and helmet (2 and 3). The mask from Ambalangoda, Sri Lanka, was used in sacred dances that were part Buddhist and part Hindu and intended to exorcise spirits and praise the sick.


1


2


3

ALL IMAGES BY JOHN MANIATIS

These and other objects are on display through April 10. Also look for the full-length sculptures by Malvina Hoffman of an Andaman aborigine on the west upper floor by the Japanese lacquer, and a Tamil man climbing a palm tree on the east upper floor near the minerals.

Glass Plate Negatives to Retire

Nina Cummings, Photo Archives

All good things must come to an end, or at least be put to rest.

The Field Museum's glass plate negatives—part of a stunning archive of some 500,000 images spanning 110 years—present both an extraordinary resource and special challenge. Scholars, publishers, museums, filmmakers and others hail them as rare, beautiful moments of our nation's past, yet ongoing handling of the frail plates to reproduce print or digital images has put them at risk.

The Legends Collections, in particular, were produced between 1895 and 1906 and contain 2,500 images from significant events in both Field Museum and American history:

- Photographer Harold Menke captured Elmer Riggs's dinosaur-collecting expeditions to Wyoming and Colorado, which yielded the type specimen of *Brachiosaurus* and the tail of an *Apatosaurus;*
- Carl Akeley, renowned as the father of taxidermy, documented his travels to Africa to collect mammal specimens and ethnographic objects;
- Charles Carpenter accompanied anthropologist George Dorsey to Arizona to record Hopi people and villages. This collection's value climbed when the US government eventually banned photography on the reservations;
- Carpenter also took portraits of native groups representing the United States, Argentina, Africa and the Philippines at the 1904 Louisiana Purchase Exposition in St. Louis.

While the plates have been carefully maintained for decades, changes in temperature and relative humidity can cause cracking, blistering and lifting of the emulsion from the glass base. A grant from the National Historic Publications and Records Commission is enabling the photo archives department to duplicate the plates to film and create an online database, making the collection more accessible for research and publication. In order to preserve these precious archives, the delicate originals will be retired from active circulation.



HAROLD MENKE/CSGEO3998

1. Dynamite blast on the site where an Apatosaurus *was found. Fruita, Colorado, 1900.*



CARL AKELEY/CSZ20171

2. Maasai warriors modeling for Carl Akeley's sculptures, now on the Museum's ground floor. East Africa, 1906.



CHARLES CARPENTER/CSA185

3. Architectural overview of a Hopi village.



CHARLES CARPENTER/CSA15208

4. Unidentified woman at the 1904 Louisiana Purchase Exposition, in an unusually informal pose for the time.

Save the Date – 54th Annual Members' Nights

Don't miss the most highly anticipated member event of the year!

On June 2 and 3, go behind the scenes to visit areas that are normally off limits to the public. Explore our vast collections, meet our scientists and see where our exhibitions are developed. Enjoy world music and dance, and participate in special activities. Your invitation will arrive soon.



CATHRYN C. MONTOYA/GN90589.14C

Sue Suite a Super Sweet Deal

To celebrate Sue the *T. rex's* 5th birthday, The Field Museum and The Ritz-Carlton Chicago are unveiling a Sue Suite package for dinosaur lovers of all ages!

Children will receive a Sue-inspired gift and special welcome packet. Your suite will be transformed with a "Do Not Disturb: Dinosaur Sleeping" door tag, framed Sue posters, dinosaur-themed toss pillows and a dramatic 9-foot-tall cutout of a *T. rex!*

Other special amenities include "decorate your own" cookies and a dinosaur toothbrush, toothpaste and soap, as well as videos, games and puzzles available on loan. Children 12 and under can enjoy complimentary meals from the room service menu and have an opportunity to make cookies with the hotel's executive chef.

Whether it's a birthday surprise for the young paleontologist or a family weekend in the city, please call The Ritz-Carlton Chicago at 800.806.9232 to check rates and availability.



XRT93 Presents Play the Field

Mix culture with cocktails, hear the best bands and explore our exhibitions—all for a discount.

Tickets to XRT93's Play the Field, a popular monthly concert series, are $15 at the door for Field Museum members 21 and over with their ID card. The price includes a complimentary cocktail. Come see The Samples on March 24, an acoustic band known for its infectious, soulful songs on socio-political issues and matters of the heart.



Visit the events calendar at www.fieldmuseum.org as the date nears to find out who's playing on April 28 and May 26. All shows are from 6 to 11pm. The summer concerts will move to the terrace. All proceeds benefit The Field Museum.

Rebuilding Your Museum

Filling in a Lightwell

Behind every construction barricade at The Field Museum is a new project to enhance your visit or the research potential of our scientific staff.

The original building contained six lightwells, which were hollowed spaces in the roof with windows that brought natural light and air into the Museum's upper floors. As time passed, however, conservators learned that controlled lighting is imperative to preserving artifacts and specimens. HVAC systems also improved. The windows were eventually covered, making the lightwells obsolete. Each one, roughly 42 feet wide by 120 feet long, has been filled in to form needed exhibition and research space. The northeast lightwell is the last one to be completed.

This project is partly linked to the renovation of the *Life Over Time* (LOT) exhibition, which is reopening in 2006. Filling in the lightwell's second floor will improve visitors' ability to move through the new exhibition, which was shaped like a giant U and cumbersome in certain sections. The added floor will also increase gallery space for rotating content on current information, debates and new discoveries in the evolutionary sciences. (See page 18 for more on the LOT renovation.) Filling in the third floor will increase the botany department's storage and academic areas. In all, this project adds about 15,000 square feet to the Museum's footprint.

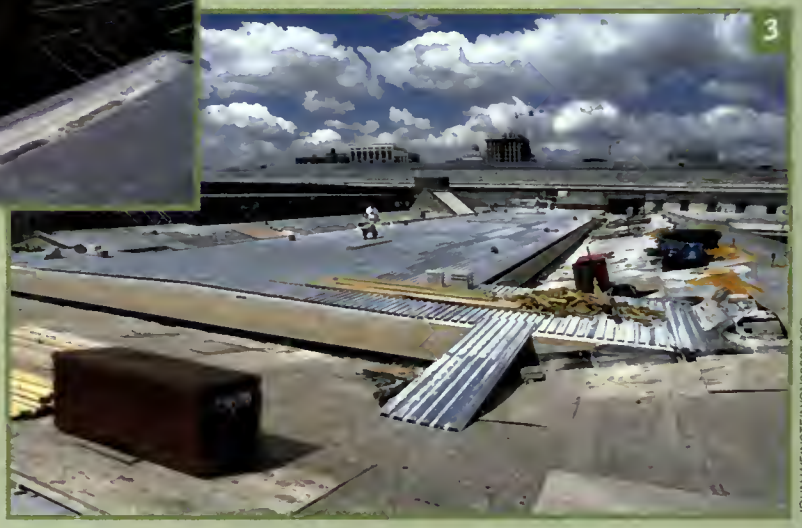
The northeast lightwell project is sponsored, in part, through grants from the US Department of Housing and Urban Development and the Illinois Department of Natural Resources.



CATH ASSOCIATES



CATH ASSOCIATES



JOHN WEINSTEIN/GN90695.08D

1. View inside the lightwell before it was filled.

2. Smoothing out a newly added concrete floor.

3. Early phases of the new roof.

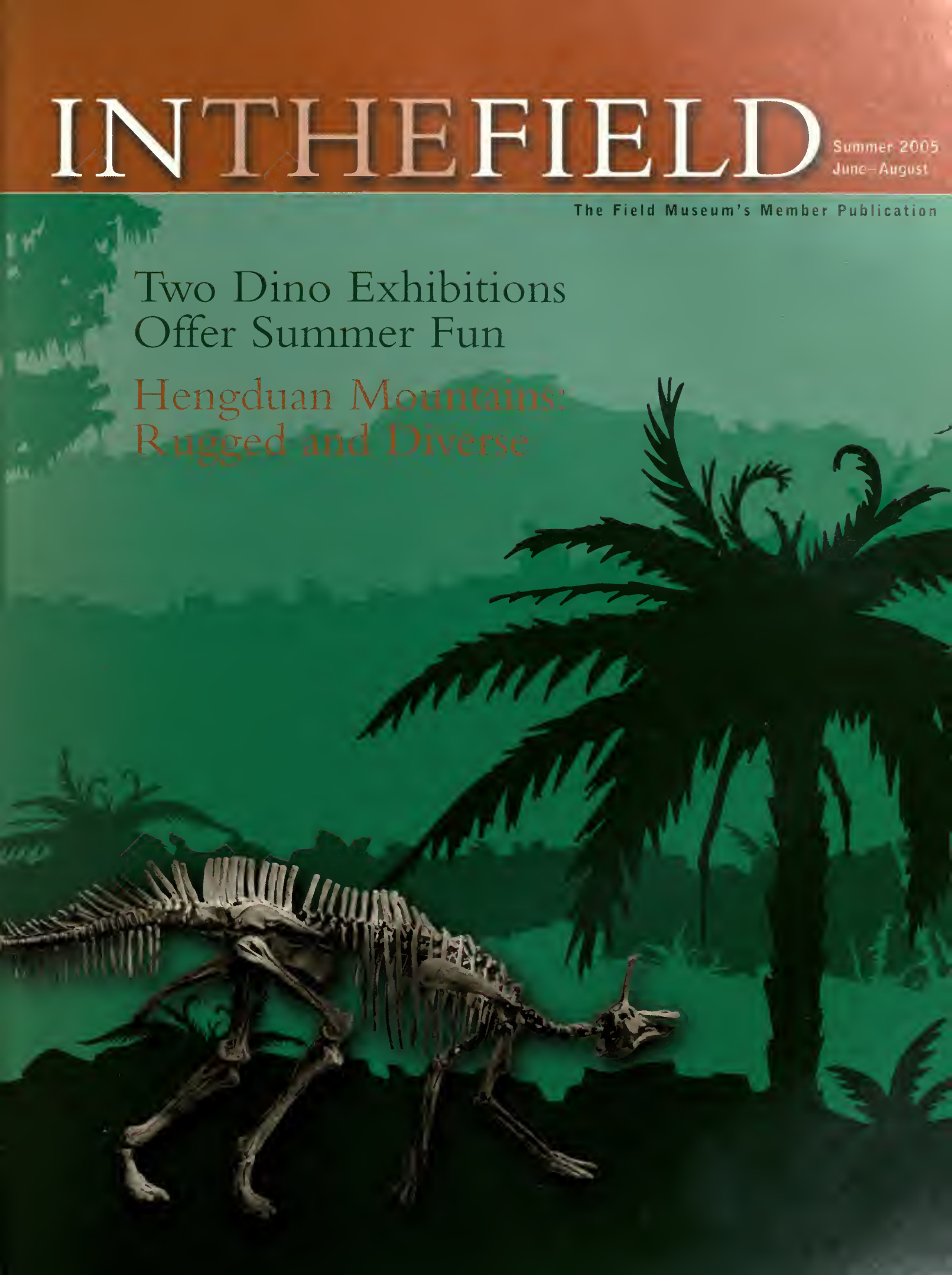
IN THE FIELD

Summer 2005
June–August

The Field Museum's Member Publication

Two Dino Exhibitions Offer Summer Fun

Hengduan Mountains: Rugged and Diverse



An Opening, a Closing and a New Beginning



JOHN WEINSTEIN /GN88119.6

Curiosity and a sense of wonder know no boundaries. I recently returned from a trip to Japan where a cast model of Sue made its international debut at Tokyo's Dino Expo. Our famous *T. rex* was a smash hit—Tokyo was plastered in Sue posters and more than 200,000 visitors flooded Dino Expo in the first month of the event that will travel to Nagoya, Osaka and Kitakyushu before closing in April 2006. While in Tokyo, our Field Museum team also met with representatives from museums in New Zealand, Singapore, Korea and China to discuss taking the traveling Sue exhibition to their countries. We hope to build on the success of Sue in Japan to launch an extensive world-wide tour.



WHITNEY OWENS

John McCarter (center) and Japanese officials at Dino Expo ribbon cutting.

With this issue of *In the Field* we mark an end and a beginning. We say farewell to editor Amy Cranch, who is moving with her fiancé to the San Francisco area. Amy took the magazine in bold new directions and received overwhelmingly positive feedback all around. In recalling her five years here, Amy admits she was at first unfamiliar with the world of science. But tapping into the Museum's vast store of knowledge deepened her wonder for the world and commitment to her nature-centered lifestyle. With each person she encountered here and each story she worked on, she realized her job was anything but routine.

Tokyo was plastered in Sue posters.



© ASAHI SHIMBUN

Amy especially would like to thank her two primary collaborators, Meighan Depke of Depke Design and Allison Nelson of Unique Printers who have diligently helped her produce each quality issue. In turn, we thank Amy and wish her the best as she enters an exciting new chapter in her life.

As Amy leaves, we welcome Nancy O'Shea to the editor's desk. Since 1997 Nancy has worked as media relations manager in our public relations department. Her resume also includes jobs in journalism, marketing and education. The depth of her experience plus her familiarity with the Museum will help us continue *In the Field's* tradition of providing an in-depth look at this great institution.

John McCarter

John W. McCarter, Jr.
President and CEO

What do you think about In the Field?

For general membership inquiries, including address changes, call 866.312.2781. For questions about the magazine *In the Field,* call 312.665.7115, email noshea@fieldmuseum.org, or write Nancy O'Shea, Editor, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496.

INTHEFIELD

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Nancy O'Shea, The Field Museum

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Cover: Meet dinosaurs you've never seen before when *T. rex* Sue's friends come to visit—all the way from China! *Dinosaur Dynasty: Discoveries from China* is running through April 23, 2006. Skeleton on the cover is a *Tsintaosaurus*. Photo: Royal British Columbia Museum.

The Field Museum salutes the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District.

The Field Museum

1400 South Lake Shore Drive
Chicago, IL 60605-2496
312.922.9410
www.fieldmuseum.org



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SUSAN KELLEY



ROBERT D. MARTIN

2

Dinosaur Dynasty offers visitors a once-in-a-lifetime chance to meet a whole new set of dinosaurs from China.

Top: A diverse set of dinosaurs roamed Cretaceous China.

4

A Field Museum anthropologist working at Tibes in Puerto Rico is producing groundbreaking results for Caribbean archaeology.

16

Field Museum botanist searches for a small, flowered herb in the rugged, diverse landscape of China's Hengduan Mountains.

Middle: Richard Ree, PhD, collects specimens.

18

A Field Museum primatologist has helped solve the decades-old mystery of Gibraltar's famous Barbary macaques.

Bottom: About 200 Barbary macaques live on the hillsides of Gibraltar.

Museum Campus Neighbors

Adler Planetarium America's first planetarium is celebrating 75 years of exploration! Visitors can *Race to the Edge of the Universe* with our anniversary sky show that examines exciting space advancements, from the discovery of Pluto to the continuous search for life. Audiences can also time travel with *TimeSpace* (July 1), a 3-D show that transforms the StarRider Theater into a time machine that transports you back and forth across the Universe over 14 billion years. Yearlong activities include a celebration of human space exploration and America's space heroes. **Visit www.adlerplanetarium.org** for updated anniversary events, exhibitions and fun family activities, or call 312.922.STAR.

Shedd Aquarium Come to Shedd Aquarium to *Celebrate 75*—Shedd's diamond anniversary. It's time to party with the animals. First, meet more than 70 species of nature's walking toolboxes in the new special exhibit, *Crabs*. See how crabs' amazing machinelike body parts predate our most advanced technology by millions of years. Then visit a rare pair of Grand Cayman blue iguanas and a guitarfish that really rocks. And be sure to say hello to Shedd's oldest resident, Granddad, an Australian lungfish that's been at the aquarium since 1933. **Visit www.sheddaquarium.org** for more information on *Celebrate 75* events, or call 312-939-2438.



Dinosaur Dynasty: Discoveries from China

All Images © Royal British Columbia Museum

Sue the *T. rex* went on display at The Field Museum five years ago, and to help celebrate her birthday, some friends are coming to visit—all the way from China! Running through April 23, 2006, *Dinosaur Dynasty: Discoveries from China* offers a chance to see dinosaurs from one of the world's hottest spots for dinosaur discovery and research.



Top: Protoceratops, *85 million years ago.*

Above: Cretaceous China, 144–65 million years ago.

Dinosaur Dynasty features real fossils and life-size casts of 21 dinosaurs, along with several specimens of dinosaur eggs and other creatures from all three periods of the Mesozoic era: the Triassic, Jurassic and Cretaceous. Dinosaur enthusiasts of all ages will enjoy hands-on activities that compare these creatures with their North American relatives and that pronounce their Chinese names at the touch of a button. Visitors also can touch a six-foot, 80-million-year-old fossil leg bone, plus casts of dinosaur teeth, skin and claws.

Meet Sue's Chinese friends

Check out who's on Sue's guest list: the long-necked *Mamenchisaurus;* the duck-billed *Tsintaosaurus; Psittacosaurus,* or parrot lizard; *Sinosauropteryx,* a feathered dinosaur; and *Monolophosaurus* locked in combat with a *Tuojiangosaurus.*

Never heard of them before? It could be because they're unique to China. While they resemble the dinosaurs we know, there are plenty of new names and fascinating differences to learn. Here's some basic information on our Chinese friends to prepare you for your encounter:

Triassic Period: 248 to 206 million years ago

Lufengosaurus *(LOO-fung-oh-SAWR-us)*
An early ancestor of *Mamenchisaurus,* this sauropod stood nine feet tall to feed on coniferous trees, high above the reach of its competitors. This dinosaur, which actually lived at the start of the next geologic period, is similar to and related to a group of dinosaurs that were common during the Triassic.

Two original fossil egg nests
See two very different fossil nests, including the breadloaf-shaped eggs of a small, meat-eating theropod and the spherical eggs of a large, plant-eating sauropod.

Jurassic Period: 206 to 144 million years ago

Tuojiangosaurus *(twoh-JEE-ANG-o-SAWR-us)*
This early stegosaur was the first plated dinosaur discovered in China. Its plates helped control its body temperature, and its double-spiked tail could whip against an attacker's belly.

Monolophosaurus *(mon-uh-LOH-fuh-SAWR-us)*
This large meat-eater would have been a fearsome opponent for the *Tuojiangosaurus* it's fighting. The crest on its skull might have attracted a mate or warned off other dinosaurs.

Mamenchisaurus *(mah-MEN-chih-SAWR-us)* This was the longest-necked species that ever lived: Adults could grow up to 70 feet long. It had an extra nerve center near its hips to control its legs and tail. It also needed a huge heart to pump blood through the giant body, estimated to weigh 30 tons.



Cretaceous Period: 144 million to 65 million years ago

Caudipteryx *(caw-DIP-ter-iks)* This theropod has given scientists new insights into the evolution of feathers. Its arm resembled a wing but worked like a limb—*Caudipteryx* could not fly.

Protoceratops *(PRO-toe-SAIR-uh-tops)* This dinosaur might have inspired the myth of the griffin, an animal said to be part eagle, part lion. It had a horny frill at the back of its skull, a beaked mouth and may have traveled in herds.

Tsintaosaurus *(CHING-DOW-SAWR-us)* A prominent spike on its head—like the horn of the mythical unicorn—sets this duck-billed herbivore apart from hadrosaurs found in North America.

Why China?

China has some of the best preserved, most abundant and most diverse dinosaurs of any place on Earth. According to Peter Makovicky, PhD, Field Museum dinosaur curator, China's geology contributes to its fossil richness.

"To get good preservation, you need an area where sediments are being deposited at a reasonably high rate, to give material a good chance of fossilizing," Dr. Makovicky explained. "China had several episodes of tectonic shifting throughout the Mesozoic era, forming mountains separated by basins and creating a lot of fossil-bearing sediment."

Good preservation can reveal tiny details that hold the key to a dramatic evolutionary story. For example, scientists could see that the primitive, filament-like feathers on *Sinosauropteryx,* which was found in Liaoning, China, were not true flight feathers. These downy structures also told scientists that feathers began evolving in dinosaurs long before the origin of birds.

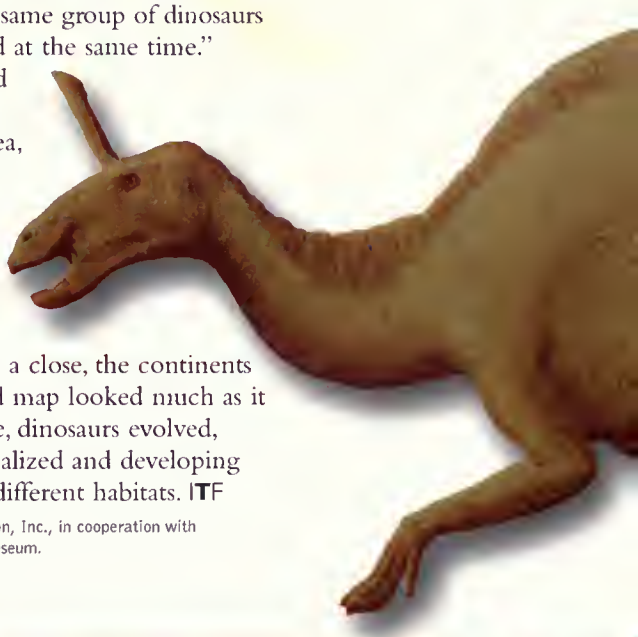
Left: Sinosauropteryx, *125–120 million years ago*

Below: Tsintaosaurus, *85–70 million years ago*

Dinosaur diversity

Dinosaur Dynasty also tells the story of how our planet changed over the 165 million years that dinosaurs ruled the earth—and how this affected the evolution of dinosaurs. "We often don't stop to think about how diverse dinosaurs are," said Cheryl Bardoe, the exhibition's senior project manager. "This exhibition tells a story of incredible biodiversity. Visitors will see that the same group of dinosaurs didn't live all over the world at the same time."

When dinosaurs emerged 165 million years ago, one supercontinent, called Pangea, covered one-quarter of the Earth's surface and was surrounded by a massive ocean. By the end of the Mesozoic period, when a mass extinction brought the Age of the Dinosaurs to a close, the continents had separated and the world map looked much as it does today. During this time, dinosaurs evolved, becoming increasingly specialized and developing special features to adapt to different habitats. ITF



Dynosaur Dynasty was produced by DinoDon, Inc., in cooperation with Beringia Ltd. and the Inner Mongolian Museum.

Get Down and Dirty at Sue Discovery Dig, Through Sept. 5

Admiring someone else's dinosaur discovery is one thing. Unearthing your own ... now that's an adventure!

Located beneath a 6,000-square-foot outdoor tent on our new southeast terrace, the *Sue Discovery Dig* invites junior paleontologists to help uncover a full-size replica of Sue the *T. rex.*

Toddlers can explore safely in the sand, feeling their way to "dinosaur bones" or simply enjoying the pleasure of digging. Older children can use paleontologists' shovels and brushes to uncover buried fossils and identify their discoveries with the help of our resident dinosaur team. Then they can head to the fossil preparation lab to finish the job, removing the rock matrix from a variety of *T. rex* bones.

Junior paleontologists hunt for fossils.



Tibes a Doorway to Puerto Rico's Past

L. Antonio Curet, PhD, Assistant Curator of Circum-Caribbean Archaeology, Department of Anthropology



While hurricanes are historically deadly, Hurricane Eloise brought good tidings to the indigenous heritage of Puerto Rico in 1975. After its related floods and mudslides subsided, a farmer looking for wood found the remnants of an ancient culture that had been buried beneath sediment for more than seven centuries. Within a few years, the Indigenous Ceremonial Center of Tibes, as it was named later, became one of the most important—and to date the oldest—sites of its kind in the Caribbean.

Fragment of effigy vessel found near the entrance of the main, central plaza of Tibes.

Two cultures revealed

Tibes is located near the south-central coast of Puerto Rico just north of Ponce, approximately eight kilometers (five miles) from the shore. The site was established on the alluvial terraces of the Portugués River between the lower coastal plains and semiarid hills of the Cordillera Central. It contains several discrete cultural deposits and 12 sizeable stone structures—ball courts, plazas and causeways—nine of which have been restored for the public to enjoy.

The Sociedad Guaynía de Arqueología e Historia, a local avocational organization, first excavated Tibes during the 1970s and '80s and convinced the city of Ponce to purchase the land and establish an archaeological park, thereby preserving it in its entirety. The original archaeological work focused on evaluating and mapping the site and discovering most of the monumental architecture.

Tibes was first inhabited around AD 1. Its ancient history can be divided roughly into two major periods, the Saladoid (AD 1–600) and the Elenoid (AD 600–1200). The early excavations uncovered two clusters of burials, one under the site's central quadrangular plaza and the other beneath a ball court. We think both clusters belong to the Saladoid period and are thus older than the overlying stone structures. It seems that early Tibes was an egalitarian farming village, meaning it lacked an institutionalized social hierarchy.

Sometime during the Elenoid period between AD 600 and 900, the people of Tibes restructured their use of space. Old structures and deposits were moved or destroyed, the monumental structures we see today were built and funerary practices changed. Unlike the group burials of the Saladoid, Elenoid burials were dispersed throughout the site and placed mostly within domestic contexts, such as refuse middens (heaps) and/or beneath possible house floors. In addition, the pottery changed drastically from highly elaborate, painted pottery of the Saladoids to coarse, incised, unpainted ceramics. These suggest that some form of political centralization and social stratification had developed. For unknown reasons, Tibes was practically abandoned around AD 1200 before the Spanish arrived.

The missing household link

With a long interest in why and how human behavior changes, I am particularly concerned with how Tibes transformed from an egalitarian to a stratified society. Whereas previous researchers studied Tibes' large structures, I hope to discover elite and commoner households, the basic unit of social organization, that can help us understand the shift.

Since 1995, I have been directing a multidisciplinary team that includes specialists from Pennsylvania State University, the University of Florida, the USDA Forest Service and Ball State University. Working with the city of Ponce, our team has been investigating such topics as how the ancient cultures used plants, what animals were present and exploited, and the geology of the site. This is the first time a Field Museum archaeologist has conducted research in the Caribbean, and funds have been provided by the National Science Foundation, the National Geographic Society, the Heinz Foundation and Mr. and Mrs. Richard R. Kracum.

While the structures at Tibes are not as spectacular as those found in Mesoamerican and Andean regions, they are still considered monumental. The people of Tibes had to remove a great deal of soil, level the ground, and transport suitable rocks from

Field Museum Curator L. Antonio Curet directs a multidisciplinary team that includes specialists from Pennsylvania State University, the University of Florida, the USDA Forest Service and Ball State University.



L. ANTONIO CURET

the river and hills to build the central sunken plaza. Although we don't know precisely what happened there, most Caribbeans agree that round and square structures were used communally for areytos, or feasts, and the cohoba ceremony, a ritual that involved a hallucinogen to contact the supernatural world. Rectangular structures are normally interpreted as ball courts for a ritualistic and/or entertaining game that entailed passing the ball from one side to the other without using the hands or allowing it to hit the ground.

Discovering household units is difficult since they were built of perishable materials, and compacted dirt floors and postholes are often the only observable remains. To ensure some success, I conducted a number of strategies that included the use of shovel pits, test units of one square meter, and three geophysical techniques—ground penetrating radar, electric resistance, and magnetometry—that use electronic equipment to scan the surface and measure different physical properties that may indicate what's underground. We have discovered the postholes of at least one domestic structure, a cooking area, and its trash midden, which contained burnt shells, bones, cooking pottery, charcoal and ashes. We also found Saladoid deposits, a possible area where ritual paraphernalia were discarded near the main plaza's entrance, and some possible offerings (cache) at a ball court entrance.

Advancing Caribbean archaeology

We have just begun expanding our excavations, but the project is already producing groundbreaking results for Caribbean archaeology. For example, dates obtained using radiocarbon or C-14 techniques indicate that the site may have become a ceremonial center around AD 1000–1100, rather than around AD 900—a slower shift than originally thought. Charcoal analyses have detected the cohoba tree (Peptedina peregrina), the first positive archaeological identification of this species in the Caribbean. And faunal analysis indicates the presence of guinea pigs (Cavia porcellus), an exotic rodent species that was originally domesticated in the Andes. The small number of guinea pigs in our samples suggests that this animal was an elite food and/or used in rituals. Both the guinea pigs and the cohoba come from deposits that are predominantly Elenoid, supporting evidence that ceremonial activities and socio-political centralization intensified during this period.

Such preliminary information is already creating a clearer picture of what took place to transform Tibes. Data on such issues as the timing of the changes, how the space was converted, and how people were buried are helping us develop new hypotheses to redirect our research and comprehend the rise and fall of Tibes.

How did access to subsistence and economic resources change with the development of the ceremonial center? Who controlled the access? Did economic, political, and social centralization occur at the household, kin group, or community level? What kind of leadership presided before and after the changes? And finally, but no less important, why was Tibes abandoned less than 200 years after its final development? It is only through a multidisciplinary approach to gathering environmental, economic, social, cultural, and political data that we can understand the ancient people of the Caribbean. ITF

Visit http://ponce.inter.edu/tibes/tibes.html for more information on Tibes.

Teen Volunteers Dig the Field

Tiffany Plate, Writer

It's 10am on a Saturday, and 16-year-old Jessica Almanza is giving up precious weekend time to be at The Field Museum. But she doesn't seem to mind. Since last summer, Almanza, a student at Mother McAuley Liberal Arts High School, has dedicated two Saturdays a month to help teach visitors about dinosaur teeth, global trade and other fascinating topics.



JASON BOZONELOS

Jessica Almanza, 17, and Julie Honcharevich, 17, help teach youngsters Joshua and Sydney Lancaster about dinosaur teeth and claws.

Almanza joined the Museum's longstanding teen volunteer program to fulfill her high school community service requirements. But she got more than she bargained for. The program introduces young people to the study of science and history and offers in-depth experiences with the Museum's research, collections and scientists. "Volunteering at the Museum has allowed me to consider working with a museum's education department," said Almanza.

Recruiting teens from a wider, more diverse subset of Chicago, the Museum will have about 75 teen volunteers this summer—up from 50 last summer. Selected students (over age 13) commit to at least 50 hours during July and August and conduct activities that bring them into the Museum's public spaces.

Teens taking ownership

With guidance from Museum staff, the teens' main focus is the Interpretive Stations, which offer hands-on activities, demonstrations and expanded information on natural history and culture themes. Assigned to one station a day, the teens are responsible for set up and break down, answering questions from visitors and taking ownership of the knowledge they impart. Last summer, teens interacted with a staggering average of 17,000 visitors each month.

Other teens lead Story Time: Facts, Fables and Fiction, a free 20-minute program designed for families with preschool children in which participants hunker down in the Mammals of Asia hall to hear a story and make an art project. As part of our year of dinosaur activities, teens will read dinosaur-themed books to an expected 1,600 visitors this summer, as well as help facilitate the *Sue Discovery Dig*, where kids ages 4 to11 can uncover their very own fossils and unpack and clean a variety of *T. rex* bones.

Reciprocal relationships

One of the program's greatest accomplishments is that it introduces teens to careers in science. "I have learned more than the trivial facts about natural history and science since I've been involved at the Museum, because I interact with people who are so passionate about the Museum's exhibitions and subjects," said Almanza.

In return for the opportunities we give these teens, we are provided with a passionate and youthful core of facilitators that enhances The Field Museum experience for our visitors. Some of our most enthusiastic volunteers even help plan the activities they carry out. Others continue volunteering throughout the school year, and still others take their commitment into the greater public arena and integrate it into their own education.

In 2004, teen volunteer Katherine Hlousek responded to a less-than-stellar *Chicago Tribune* review of The Field Museum with her own feelings. In her letter—which the *Tribune* printed a few weeks later—Hlousek encouraged visitors to look beyond the stereotype of the natural history museum to see some of the fascinating back stories our exhibitions offer.

The Museum cherishes the praise of young adults such as Hlousek, and seeks to capitalize on their enthusiasm by challenging them to educate others. "Not only do our teen volunteers enhance the Museum-going experience for thousands of visitors, but they also begin to develop their commitment and role in a larger community," added Brian Droege, teen volunteer supervisor. "I am continually learning from the perspective and energy they bring to The Field Museum."

Visit the Museum this summer and you're bound to run into a fabulous teen volunteer. Interpretive Stations are available everyday 10am–noon and 1–3pm; Story Time happens Saturdays and Sundays in June, and everyday in July and August at 1:30pm.

YOUR GUIDE TO THE FIELD

Calendar of Events for Summer 2005 June–August

Inside: Exhibitions Festivals Family Programs Adult Programs

Programs at a Glance

Details inside!

Family Programs

Museum Campus Free Week *6/5–6/10*

Family Overnight *6/24*

Dinosaur Discovery Days *7/8–7/10*

Summer Camp *7/11–8/5*

Paso Horse Film and Discussion *7/23*

Mazon Creek Fieldtrip *8/27*

Adult Programs

Bird Identification Lecture *6/25*

Thornton Quarry Fieldtrip *6/25*

Earthquakes and Tsunamis Lecture *7/23*

Butterflies Fieldtrip *8/20*

New Exhibition

Through April 23, 2006

T. rex Sue's friends have come to visit—all the way from China! It's a once-in-a-lifetime chance to meet a whole new set of dinosaurs from one of the world's hottest spots for dinosaur research. Dozens of authentic fossils and life-size casts span the 165-million-year dynasty of these extraordinary creatures—far longer than any human dynasty.

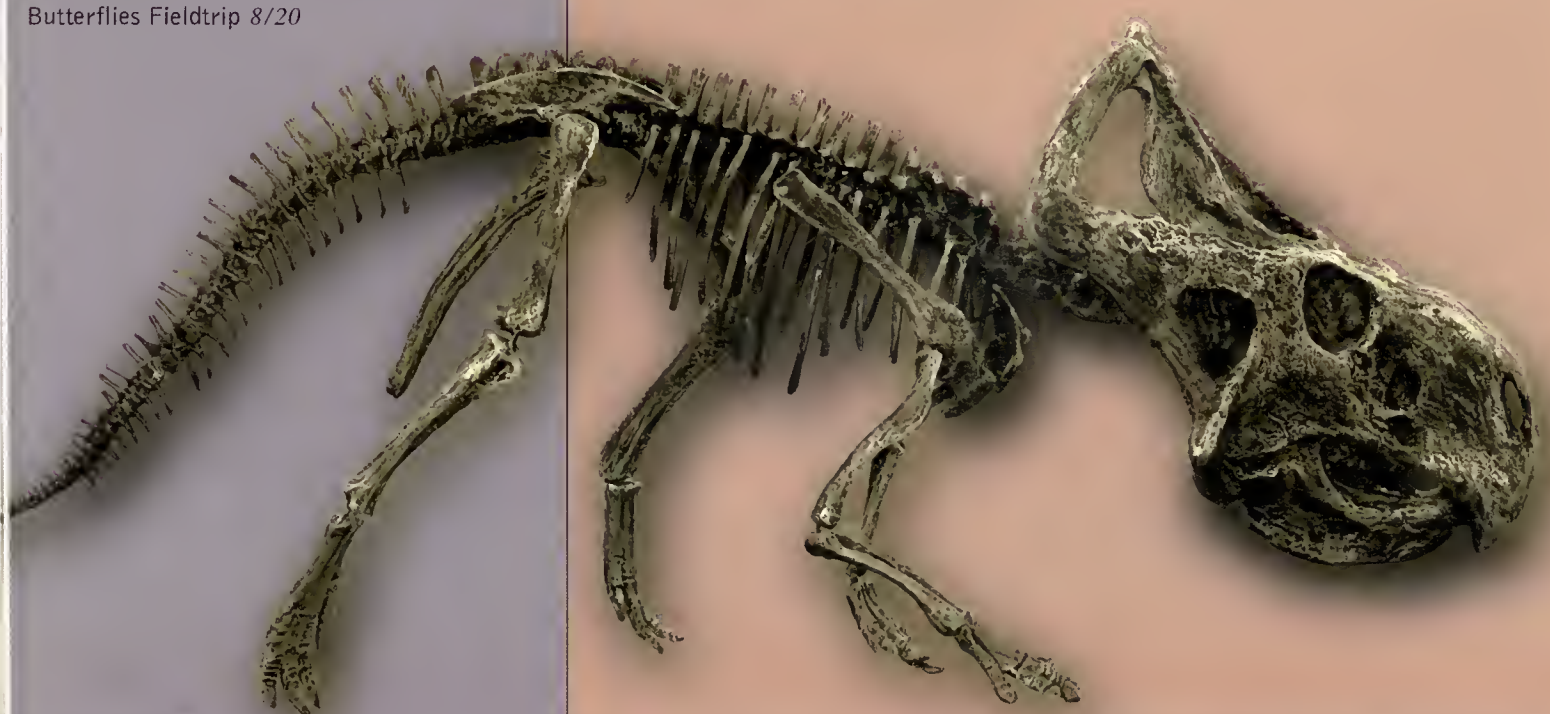
DINOSAUR DYNASTY

Discoveries from China

Dinosaur Dynasty illustrates the amazing diversity of dinosaurs from the *Mamenchisaurus,* the longest-necked animal that ever lived, to the feathered dinosaur *Caudipteryx.* Visitors will see how dinosaur life begins from two very different nests of fossil eggs—and how it may have ended for at least one plated *Tuojiangosaurus,* shown under fierce attack by the crested meat-eater *Monolophosaurus.* This exhibition offers hands-on fun for dinosaur enthusiasts of all ages.

For a full day of dinosaur doings, combine a visit to *Dinosaur Dynasty* with a trip to the *Sue Discovery Dig* (see inside flaps).

This exhibition was produced by DinoDon, Inc., in cooperation with Beringia Ltd. and the Inner Mongolian Museum.



The Field Museum

General Museum Information: 312.922.9410

Family and Adult Program Tickets and Information: 312.665.7400

Please note: Refunds will be issued by Field Museum staff, minus a $10 processing fee, for group and family overnights only. No refunds or exchanges are permitted for any other programs. Fees for programs cancelled by The Field Museum will be refunded in full.

Sue Discovery Dig

Through September 5, 2005

Join a spectacular dinosaur expedition—and help unearth a full-size replica of our famous *T. rex,* Sue! Under a 6,000-square-foot tent on the Museum's southeast terrace, this activity-based dinosaur dig has something for every family with children ages 4–11. Junior paleontologists can pick up their field tools and get to work uncovering Sue's buried bones, then head to the fossil preparation lab to finish the job, unpacking and cleaning a variety of *T. rex* bones. Our dinosaur team will be on hand to help kids identify fossils, examine their finds and record their observations. It's a great summer activity for the whole family at the Field.



Evolution of an Exhibition

Did you know that by the time *Evolving Planet*—the new expanded exhibition on life over time—opens in spring 2006, four conservators will have spent an entire year restoring the Field's incomparable collection of Charles R. Knight murals? Twenty-four of these murals, commissioned by the Museum in the 1920s to depict dramatic scenes of prehistoric life, will be prominently featured in the new exhibition.

Evolving Planet is a brand new look at the history of life on Earth, highlighting the Museum's spectacular fossil collections. Nearly 750 additional specimens will be added to the new exhibition, which will also be flexible enough to accommodate new scientific information, debates and discoveries. Come check it out in March 2006!

Inset: New view of Evolving Planet. *Rendering by Eric Manabat.*

JOHN WEINSTEIN/GN90724.101D



Dinosaur Discovery Days

Enjoy a performance by the Foundation Theatre Group, see rarely viewed specimens from the Museum's collections and handle real fossils! Wander through the exhibitions, stop by an interpretive station and settle into the halls to hear a reading of a dino-themed book during Story Time.

Friday, July 8–Sunday, July 10, 10am–2pm
Free with Museum admission

Media Sponsor: Chicago Parent



COURTESY OF TAMMY HAGGERTY-JONES

Treks With a T. Rex

Foundation Theatre Group

Tex the *T. rex* and his paleontologist guide, Dr. Jonas, need help! Join this cast of colorful characters and their dinosaur friends from all over the world as they try to figure out what *Tyrannosaurus rex* did with its tiny arms.

Saturdays, June 4, July 9, Aug. 6, Sept. 3, 1pm
Free with Museum admission



KIMBERLY MAZANEK/GN89277 26C

Interpretive Stations and Story Time

Stop by a hands-on interpretive station to learn more about dinosaurs from around the world and make your own creative dinosaur art project. Museum docents will be on hand to answer questions and share their in-depth knowledge, facts and figures. Then take a seat in the exhibition halls to hear a dino-themed tale during Story Time!

Saturdays and Sundays in June; Daily in July and August
Interpretive Stations: 10am–noon and 1pm–3pm
Story Time: 1:30pm
Free Museum admission

Free Week on Museum Campus

Sunday, June 5–Friday, June 10

In addition to free general admission to The Field Museum, you'll get access to a variety of free outdoor activities near the new east entrance. You and your little ones can assemble a giant 3-D puzzle of a *Triceratops,* play the *Renewable Energy* game or trace your favorite dinosaur in chalk outside the Museum!

Dinosaurs and Fossils at the Harris Educational Loan Center

Now available to families!

Stop by the Harris Educational Loan Center and find out about the dinosaur- and fossil-related materials available to families, educators, scout troops and home schoolteachers. This summer, we will be featuring free demonstrations of two featured Experience Boxes, *Dinosaurs and their Times: Cretaceous,* and *Dinosaurs and their Times: Jurassic.*

Friday, July 8–Sunday, July 10, 10am–1pm
Free with Museum admission
Visit www.fieldmuseum.org/harrisloan for details.



DAVID RIGG/GN90738.0057D

Family Programs

Family Overnight

Dozin' With the Dinos

Sue the *T. rex* is having a sleepover! Join us for a night of family workshops, tours and performances. Explore ancient Egypt by flashlight, prowl an African savannah with man-eating lions and stroll through the Royal Palace in Bamun, Africa. Then spread your sleeping bag amid some of our most popular exhibitions. The event includes an evening snack and breakfast.

Families with children ages 6–12
5:45pm on Friday, June 24,
until 9am on Saturday, June 25
$47, members $40



CATHRYN C. MONTOYA/GN90733.10AC



JOHN WEINSTEIN/GN90488.06D

Limited Space Available

Summer World's Tour 2005

Don't miss the dynamic experience of summer camp on Museum Campus! Organized collectively with Adler Planetarium and Shedd Aquarium, Summer World's Tour 2005 at the Field will allow children to trace fossils from dig to display. Campers will uncover their fossil, place it in a field jacket and prepare it for cataloging.

Choose one session: July 11–15, July 18–22,
July 25–29, or Aug. 1–5.
Register through the Adler Planetarium at 312.322.0329.
$220, members $200

Adult Programs

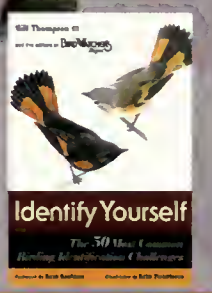
Free Lectures

Identify Yourself: Birding's Common Identification Challenges

Bill Thompson III, Editor, Bird Watcher's Digest, *and Julie Zickefoose, Author/Naturalist*

Become an expert bird watcher with the help of this informative book inspired by the Field's bird collections! The authors of *Identify Yourself* will be onsite to talk about the book's genesis and the key role The Field Museum's collections had in its publication. Purchase a book on the spot and get it signed by the authors!





Saturday, June 25, 1pm
Free with Museum admission



Reading Nature's Clues: Earthquakes and Tsunamis

Dr. Michael Wysession, Washington University

Journey to the strange and fascinating center of the Earth to see what earthquakes and tsunamis can tell us about the inside of our planet. You'll see how seismologists such as Dr. Wysession are improving our view of Earth's interior with the help of seismic waves, which in turn informs our nuclear testing practices and our use of natural resources.

Saturday, July 23, 2pm
Free with Museum admission

Exhibitions

Below is a calendar of current and upcoming temporary exhibitions. Some dates may change. Visit our website at www.fieldmuseum.org or call 312.922.9410 as the date of your visit nears.

Transforming Tradition: Pottery from Mata Ortiz
July 1, 2005–May 31, 2006

Sue Discovery Dig
Through September 5, 2005

Film Screening and Discussion

The Peruvian Paso Horse: An Oasis in the Desert

Transport yourself to the majestic landscapes of Peru and experience the elegant demeanor of the Peruvian Paso horse. This documentary narrates the horse's rich 400-year history, including the heritage and deeply rooted dedication of the men who breed and preserve it. After the film, hear panelists and members of the Peruvian Paso Horse Foundation share their extensive knowledge and experience of this enchanting animal.

Saturday, July 23, 2pm
Free with Museum admission



CYNTHIA ZEGARRA

Fieldtrip



Family Fossil Hunt at Mazon Creek

Dave Dolak, Columbia College

Do you like to hunt fossils? Visit the world-famous Mazon Creek site and discover what Illinois was like more than 300 million years ago! Plan on a quarter mile walk to fossil locations. Designed for families with children 8–17 years old.

Saturday, Aug. 27, 8am–3pm
$40, members $30
Space is limited.

Fieldtrips

Experience Thornton Quarry

Dave Dolak, Columbia College

Get a behind-the-scenes look at one of the world's largest exposed fossil reefs in this giant limestone quarry. Tour the active quarry operations, then collect fossils of the organisms that lived on a coral reef in Illinois 420 million years ago, including trilobites, cephalopods, brachiopods and crinoids. Adults only, please. Space is limited. Please register by June 20.

Saturday, June 25, 8:30am–2pm
$65, members $55



COURTESY OF DAVE DOLAK



Beautiful Butterflies

Jim Louderman, TFM Division of Insects

Take a leisurely look at local *Lepidoptera* and their friends. See insect specimens from our collections, then visit the Palos Forest Preserve District to find a summer abundance of butterflies and other crawling insects. Adults only, please. Space is limited. Please register by Aug. 15.

Saturday Aug. 20, 8am–3pm
$65, members $55

Jungles
Through January 1, 2006

Design Innovations in Manufactured Housing
Through January 16, 2006

Visit our new Underground Adventure website!

Launching mid-August, this interactive website offers fun activities for the whole family. Before your next visit, look at the "world beneath your feet" at www.fieldmuseum.org/ua. In the meantime, try to identify these creepy crawlies who have adapted to life underground:

a) I use my one, large foot to crawl along. Wherever I go, I leave a slimy trail behind me. Who am I?

Hint: I am a gastropod.
Hint: I do not have a shell.

b) I help prune weak branches from deciduous trees when I lay my eggs in them. Who am I?

Hint: As an adult, I am the loudest known insect.
Hint: I emerge from the ground in large groups, or broods, after spending anywhere from one to 50 years underground.

c) The specialized soldiers in my colony protect the colony and sometimes raid other colonies as well. Who am I?

Hint: I am one of the most socially complex of all insects.
Hint: Sometimes there are thousands or even millions of us in one colony.

Lead sponsor: Monsanto



GEORGE PAPADAKIS/GN89104 5C

Answers: a) slug b) cicada c) ant

Expeditions@fieldmuseum®

Now's your chance to join a Field Museum scientist on a dynamic, interactive journey. Jump into an expedition that's already in progress, catch up on the fieldwork from previous seasons, and see what's coming next—all at www.fieldmuseum.org/expeditions!

Through June 2005: Take your knowledge of nesting birds to great heights with Field Museum scientist Mary Hennen as she and her team climb some of Chicago's tallest skyscrapers to monitor our recovering population of peregrine falcons.



COURTESY MARY HENNEN

Through July 2005: Return with Dr. Gary Feinman to the Valley of Oaxaca, Mexico, as he continues excavations of the pre-Hispanic hilltop site of El Palmillo.



COURTESY GARY FEINMAN

Dinosaur Dynasty: Discoveries from China
Through April 23, 2006

Coming This Fall

Cultural Connections

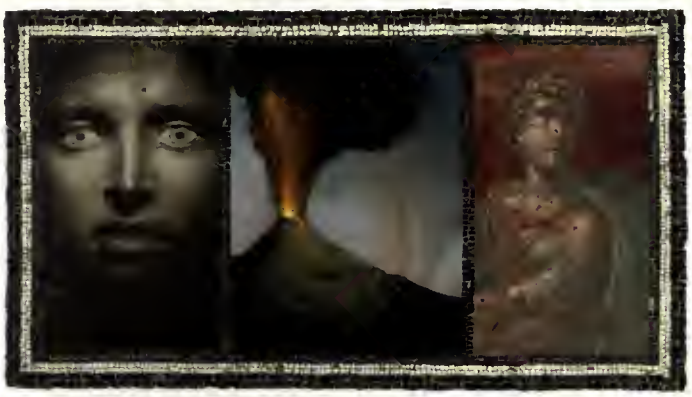
The Cultural Connections program, a partnership of The Field Museum and more than 20 ethnic museums and cultural centers in Chicago, brings you another year of cross-cultural learning and fun.

Meet this year's partners at the annual kickoff event, on Sept. 21, an evening of music, dance, food and fun for the entire family in The Field Museum's Stanley Field Hall. For more information, go to www.fieldmuseum.org/ccuc after Aug. 1.

Cultural Connections has received generous support from The Chicago Community Trust, Searle Funds at The Chicago Community Trust, The Joyce Foundation, Kraft Foods, The Women's Board of The Field Museum, Lloyd A. Fry Foundation, and Richard H. Driehaus Foundation.



JOHN WEINSTEIN/GN90499.141D



POMPEII

STORIES FROM AN ERUPTION

October 22, 2005–March 26, 2006

Master and servant, parent and child—even the household dog. When Mount Vesuvius erupted in AD 79, its dark cloud engulfed them all. Buried as they fled with their most prized possessions, their stories remained untold for centuries. Now the exhibition *Pompeii: Stories from an Eruption* uncovers the thriving society of the valley of Vesuvius and reconstructs the lives of those who lived and died there. Visitors will see more than 450 artifacts, including casts of the volcano's victims; view gorgeous room-size frescoes and mosaics, gold coins, precious jewelry, sculptures, and a variety of household objects; and learn what happens when nature unleashes its volcanic power.

The exhibition was organized by the Ministero per i Beni e le Attività Culturali, Soprintendenza archeologica di Pompei, Soprintendenza per i Beni Archeologici delle province di Napoli e Caserta, Regione Campania.

Presented by Harris Bankcorp Inc.

NATIONAL GEOGRAPHIC *LIVE!*

Now everyone's favorite presentations are available in the fall too! National Geographic explorers—from audacious photographers to renowned authors—are once again bringing their global adventures to The Field Museum with brilliant photographs, rare video and personal accounts. Visit our website for more information about this exciting four-part series. Come to one, or come to all. You're sure to be inspired.

Series tickets go on sale July 15. Get yours before the rush!



FRED HIEBERT



Witness art through different eyes.

Transforming Tradition: Pottery from Mata Ortiz



JOHN WEINSTEIN/A114388.010

July 1, 2005–May 31, 2006

Witness the rebirth of a unique pottery tradition in the exquisite ceramics from the Mexican town of Mata Ortiz.

This exhibition was organized by The Field Museum.

Jungles

Through January 1, 2006

Bold, large-scale color photographs by Frans Lanting capture the fragility and beauty of rainforests and their inhabitants.



COURTESY OF FRANS LANTING/WWW.LANTING.COM

Design Innovations in Manufactured Housing

Through January 16, 2006

Original models and drawings by noted architects and industrial designers offer creative solutions for pre-fabricated homes.

This exhibition was developed by the City Design Center, College of Architecture and the Arts, University of Illinois at Chicago, in collaboration with The Field Museum. The City Design Center, College of Architecture and the Arts, University of Illinois at Chicago received funds from the National Endowment for the Arts and the Graham Foundation for Advanced Studies in the Fine Arts to create this exhibition.



"HOME OFF THE HIGHWAY" DESIGN: TAYLOR & BURNS ARCHITECTS

Visitor Information



MIKE SIOREK



Getting Here: Field Museum visitors can park in Soldier Field's parking garage. Visit www.fieldmuseum.org for information on parking lots/rates and public transit.

Hours: 9am–5pm daily. Last admission at 4pm. Please note the Museum closes at 5pm even when an evening event is scheduled. Visitors will be asked to leave the building until 30 minutes before their event begins.

Admission and Tickets: Member passes can be reserved through the membership department (312.665.7705) or picked up at the membership services desk. For non-members, The Field Museum's gold pass, which includes general admission plus one special exhibition, ranges in price from $8 to $19, depending on your age category and whether you are a Chicago resident. Please bring your ID to receive the appropriate ticket price.

Tickets are available at the Museum's admission desks, or in advance via www.fieldmuseum.org or 866.FIELD.03. For all admission and ticket details, visit www.fieldmuseum.org.

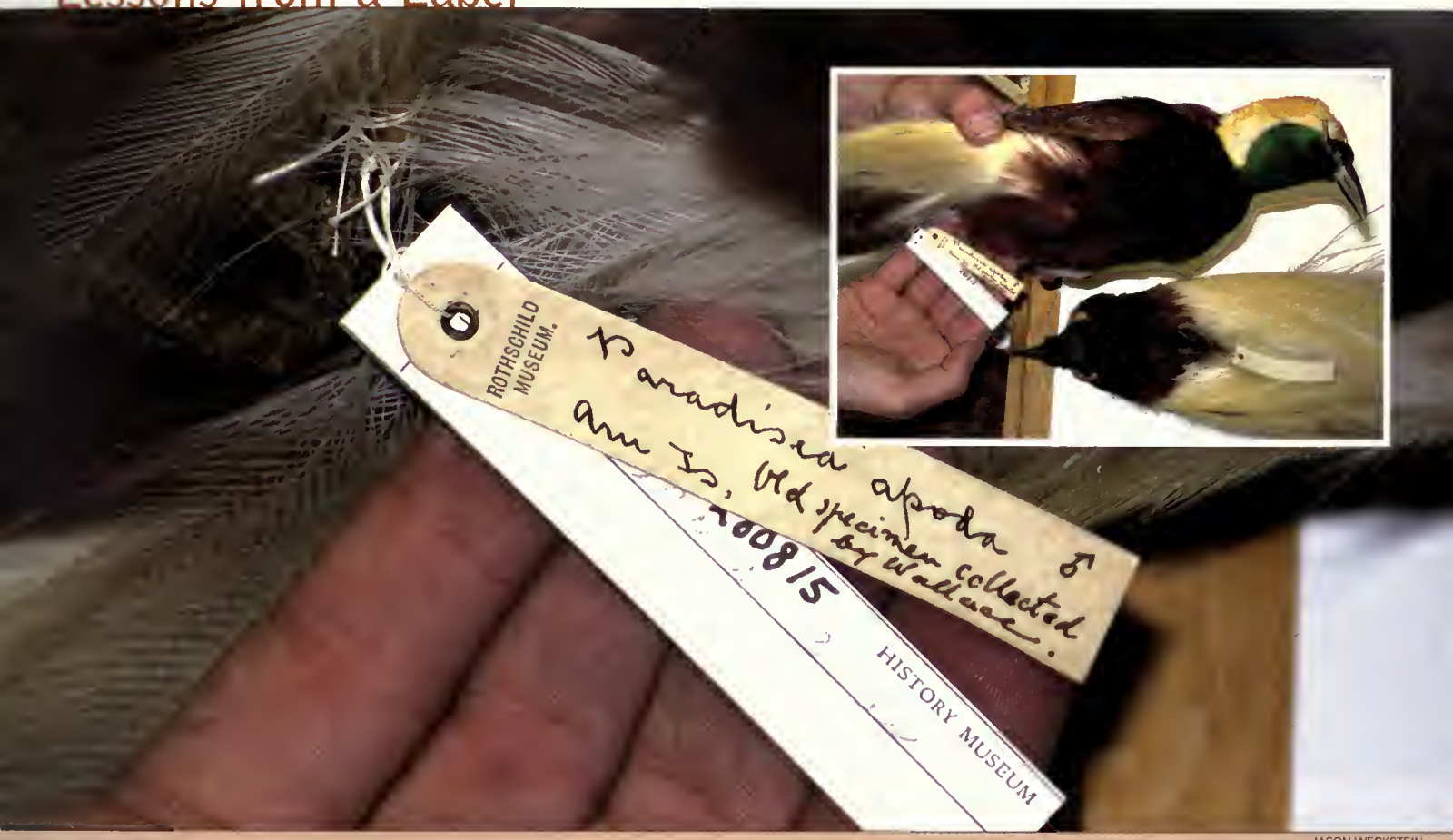
Accessibility: Visitors using wheelchairs or strollers may be dropped off at the new east entrance. Handicapped parking and wheelchairs are available on a first-come, first-served basis. Call 312.665.7400 to check on the accessibility of programs that take place outside of the Museum.

Information: 312.922.9410 or www.fieldmuseum.org

The Field Museum salutes the people of Chicago for their longstanding, generous support of the Museum through the Chicago Park District. In addition, Museum programs are partially supported by a CityArts Program A grant from the City of Chicago Department of Cultural Affairs and the Illinois Arts Council, a state agency.

In accordance with the Civil Rights Act of 1972, we do not discriminate on the basis of sex in our programs or activities. Please call 312.665.7271 to contact our Title IX Coordinator in the human resources department should you have any questions or concerns.

Lessons from a Label



JASON WECKSTEIN

Among the 450,000 specimens in The Field Museum's bird collections, FMNH #280815 is a favorite. It's a male Greater Bird of Paradise—a beautiful old specimen in excellent shape, illustrating that even specimens collected 150 years ago, if well curated, continue to be useful to modern scientists.

The scientific name for the Greater Bird of Paradise means "without feet," the result of a mistake.

The bird's information label carries the tantalizing but brief notation: "Old specimen collected by Wallace, Aru Islands." Wallace is none other than British naturalist Alfred Russel Wallace, who at the same time as Charles Darwin independently developed the idea that natural selection was an integral part of the evolutionary process. In 1857, Wallace published a paper documenting in great detail the appearance and behavior of Greater Birds of Paradise. That's why it's ironic that the original label on FMNH #280815 leaves many important questions unanswered. It doesn't give the collection date or tell exactly where the bird was found. Scientists are not even sure if Wallace collected it, although he was in the Aru Islands (now part of Indonesia) from 1854 to 1862. The scanty information—typical of early specimens—is a lesson for today's Field Museum scientists who are careful to list as much data as possible when writing labels, making our collections a richer storehouse of knowledge.

The scientific name for the Greater Bird of Paradise illustrates the importance of collections in another way. In 1758, the great Carolus Linnaeus, often called the father of taxonomy, described the bird to science and gave it the name *Paradisaea apoda*. The word "apoda" is Greek for "without feet." Actually, the species has feet—it's a perching bird—but the first specimens Europeans saw were trade skins prepared by local tribesmen who cut off the birds' feet. With footless specimens and no additional information, Linnaeus and others assumed these birds flew around without ever landing, a mistaken conclusion that scientists like Wallace dispelled with the collection of additional specimens and better data.

John Bates, PhD, chairman, department of zoology and associate curator, birds, chose this Scientist's Pick.

Hengduan Mountains: Rugged Lands, Diverse Life

Richard Ree, PhD, Assistant Curator, Department of Botany
Photos by Richard Ree

A new day was beginning in Qamdo. Nestled in the folds of eastern Tibet, the monastery courtyard was serene. Saffron-robed monks moved quietly through curtained doorways, their embroidered boots lined up outside, and chanting resonated softly from the darkness within. Outside the gates, sunlight filtered through the smoke of juniper incense, while devotees circled the compound and spun their prayer wheels.







Hengduan's biologocial richness is displayed by the many species of lousewort found there. Shown left to right: Pedicularis integrifolia, *the author with plant species and* Pedicularis cranolopha.

My reverie was broken by a mobile phone ringing strains of Mozart. The only other person around was an elderly Tibetan fingering her prayer beads, her toothless face a study in creases. She rummaged nonchalantly in her robes, flipped open the phone, and began a lively conversation. I smiled at this juxtaposition of tradition and modernity, but also felt a sense of foreboding. In the face of extremely rapid economic and social change, what will happen to one of China's greatest natural resources—its biodiversity?

A rugged patchwork of habitats

Biodiversity brought me and colleagues from Harvard University, the Chinese Academy of Sciences in Kunming and Beijing, and Kyoto University to this place—the Hengduan Mountains. Comprising around half a million square kilometers of eastern Xizang (Tibet), western Sichuan and northern Yunnan, it is one of the world's primary biodiversity hotspots, containing more than one-third of China's estimated 30,000 plant species. While our collective mission was to inventory the area's plants and fungi, I wanted to find and collect species of *Pedicularis,* the enigmatic lousewort.

When the Indian subcontinent collided with Asia about 55 million years ago, two of the planet's most distinctive landforms uplifted, the Himalayas and the Qinghai-Tibetan Plateau. A dramatic series of longitudinal ranges favorably configured for the origin and preservation of a rich biota arose at the eastern end of the collision zone. Here, four great rivers (the Irrawaddy, Salween, Mekong, and Yangtze) drain the rising plateau to the north, and summer monsoons funnel up the valleys from the tropical south. Moist subtropical forests (1,000–2,000 meters) give way to rhododendron-and conifer-dominated zones higher up (2,500-4,000 meters). Interspersed are arid valleys with distinctive vegetation, including exotic cacti. Throughout the region, majestic peaks and ridges draped in slopes of loose rock, alpine meadows and glaciers rise well over 5,000 meters like "islands in the sky."

Heterogeneous landscapes like this promote the origin of species. Natural selection causes populations to adapt to each local condition, which can eventually lead to reproductive isolation, a surefire precursor to evolutionary divergence. Organisms dispersing between isolated patches of habitat can establish new populations that over time become genetically distinct from their relatives. This creates new branches on the tree of life and may contribute to the formation of biodiversity hotspots.

Many other factors likely contribute to the Hengduan's biological richness. It directly abuts the humid tropics, from which such species as *Roscoea,* small alpine herbs in the ginger family, and *Incarvillea,* dry-adapted shrubs closely related to rainforest vines, originated. In times of climate change, as during the glacial cycles of the

Pleistocene, its longitudinal valleys formed corridors that allowed species to migrate north-south, thereby avoiding extinction. But much more research is needed to better understand why the region is so diverse. Why, for example, have there been so many evolutionary radiations of species in the harsh alpine zone?

Penchant for Pedicularis

My interest in the Hengduan region began serendipitously. As a wet-behind-the-ears graduate student planning to study passionflowers in South America, I nevertheless joined my advisor in western Sichuan in 1997. I was intrigued by how little this remote area had been explored. Jesuit missionaries and a handful of explorers contributed to the earliest collections in western herbaria. In the 1920s and '30s, Joseph Rock, for example, made extensive collections of the region's plants and animals, photographed the landscape and its inhabitants, and studied local cultural minorities, especially the matriarchal Naxi. Time seemed to roll backward as our small convoy slowly penetrated the mountains, negotiating rough-cut roads that also served as a place for the locals to dry their grain. In the field, we often met gatherers of traditional medicinal plants.

As I struggled to learn an unfamiliar flora—and to catch my breath while pressing specimens above 4,000 meters—I became fascinated with certain small herbs with unusual flowers. Many species sported peculiar beak-like protuberances that were often coiled or twisted, and some had flowers with lengthy tubes (up to 12 centimeters), a trait normally associated with pollination by animals having long mouthparts specialized for extracting nectar. I collected different species of *Pedicularis* at almost every place we stopped, and by the end of the trip, they became the primary subject of my dissertation research.

Of the roughly 500 species in *Pedicularis,* more than half occur in the Hengduan region. I want to know why there are so many species here, how they coexist and how such unusual traits as long floral tubes evolved. By tracing the "family tree" of *Pedicularis* using DNA sequences, I have inferred that long tubes evolved as many as nine times independently, suggesting that this trait is highly adaptive (repeatedly gained by natural selection).

However, there is a paradox: *Pedicularis* is pollinated almost exclusively by bumblebees, which do not have long mouthparts. In addition, the long-tubed species do not produce nectar; visiting bees only collect pollen. We do not know why *Pedicularis* has long tubes, and the fact that they have evolved repeatedly adds to the mystery.

Biodiversity hotspots, while rich with endemic species, are severely threatened by human activity. Since my first visit, I've witnessed firsthand the staggering rate of infrastructure development in the form of paved roads, hydroelectric dams and urban settlement. Disturbingly, I still see heavily laden logging trucks. Traditional ways of life continue to persist—the black tents of nomadic yak herders still dot the rolling plateau, for example—but in towns, tradition is increasingly falling by the wayside. Young people flock to internet cafes. Electric blenders are used more than wooden churns to make Tibetan butter tea. Progress, it seems, takes many forms.

I've continued to collaborate primarily with Dr. David Boufford at Harvard and Dr. Sun Hang at the Kunming Institute of Botany to inventory the Hengduan region. We distribute our results by sending specimens to other herbaria, through the web and publication. Not only does this facilitate much-needed basic research, it provides baseline data on which Chinese authorities can make sound biodiversity management decisions and thereby conserve this precious resource. **ITF**







Left to right: Pedicularis siphonantha, Pedicularis mollis *and a Buddhist stupa near the Tibetan border.*

Field Museum Primate Expert Helps Solve Mystery of Gibraltar's Macaques

Greg Borzo, Media Manager, Scientific Affairs
Photos by Robert D. Martin

After decades of speculation, the origin of Gibraltar's famous Barbary macaques has been determined.

The only free-ranging monkeys in all of Europe, Gibraltar's 200 or so semi-wild macaques enjoy the run of the hillsides in this British territory—much to the delight of millions of tourists, as well as to the chagrin of some officials responsible for their management.



Gibraltar's Barbary macaques are the only free-ranging monkeys in Europe.

There were not always, however, this many macaques on Gibraltar, which serves as a gateway to the Mediterranean Sea. In 1942, after the population dwindled to almost nothing, British Prime Minister Winston Churchill ordered that their numbers be replenished due to a traditional belief that Britain would lose Gibraltar if the macaques there ever died out.

The clandestine move was taken to bolster Britain's morale during World War II. Ever since, scientists have wondered exactly where the macaques came from.

Now, an analysis of mitochondrial DNA from 280 individual samples reveals that the macaques on Gibraltar descended from founders taken from forest fragments in both Morocco and Algeria. The research was recently published in *Proceedings of the National Academy of Sciences.* Robert D. Martin, PhD, a primatologist and Field Museum provost, was co-author of the study.

"Our project was designed as a test case for conservation genetics," said Martin. "The Gibraltar colony of Barbary macaques provided an ideal example of genetic isolation of a small population, which is now a regular occurrence among wild primate populations because of forest fragmentation. To our surprise, we found a relatively high level of genetic variability in the Gibraltar macaques. This is now explained by our conclusion that the population was founded with individuals from two genetically distinct populations in Algeria and Morocco."

Key to study: mitochondrial DNA

In mammals, mitochondrial DNA is inherited exclusively from the female, so it can be analyzed to determine matrilineal origins. This is especially relevant with mammals, such as macaques, that practice female philopatry, a social system in which females remain in their birth groups while males migrate between groups.

The research first identified 24 different haplotypes in the Algerian and Moroccan colonies of macaques. Each mitochondrial haplotype is identified by means of a specific DNA sequence.

Since the Algerian and Moroccan haplotypes are clearly distinct, evidence of any given haplotype in the mitochondrial DNA of Gibraltar macaques would indicate that they descended from the geographical population with that haplotype. It had long been thought that the Gibraltar macaques were exclusively derived from founders imported from Morocco. In fact, both Algerian and Moroccan haplotypes were found among the Gibraltar macaques, indicating that the Gibraltar colony was founded by female macaques from both regions.

There are 19 species of macaques, which have proven to be remarkably adaptable. In fact, macaques are found in more climates and habitats than any other primate except, of course, humans.

The Barbary macaque, *M. sylvanus,* is the only species that lives naturally in Africa; all other species live in Asia. Some scientists believe the Barbary

macaques were first brought to Gibraltar by the Moors, who occupied Spain between 711 and 1492. On the other hand, it's possible that the original Gibraltar macaques were a remnant of populations that had spread throughout Southern Europe during the Pliocene, up to 5.5 million years ago.



About 20 years ago, scientists estimated there were 20,000 Barbary macaques in Africa. Today, the wild population is only half that number, which led the World Conservation Union in 2002 to include the Barbary macaque as "vulnerable" on its Red List of Threatened Species.

The research also indicated that the initial split between two main subgroups of *M. sylvanus* occurred about 1.6 million years ago.

The other co-authors of the study are Lara Modolo at the Anthropological Institute of the University of Zurich in Switzerland, who conducted all of the laboratory work on the DNA samples, and Walter Salzburger at the University of Konstanz in Germany.

"Our findings reveal that the Algerian and Moroccan populations are genetically very distinct and that there are major genetic differences even within Algeria," Modolo said. "Mixing of founders from Algeria and Morocco explains why the Gibraltar macaques have kept a surprisingly high level of genetic variability despite a long period of isolation.

"At the same time, the large degree of genetic difference seen between various wild populations tells us that we should be cautious about translocating animals from one area to another," she added. "This is just one of the lessons for conservation biology to be learned from this study." ITF

Tour Sicily and Pompeii with The Founders' Council

The Founders' Council inaugurated its travel program last year with an exciting trip to Brazil's lush and ecologically rich Pantanal region. Tour participants visited this biologically diverse area alongside world-class Field Museum scientists, learning more about the Museum's important research through first-hand exploration.

The adventure continues this year with Crossroads of Civilization, a guided tour of Sicily with an optional trip extension to the archaeological ruins of Pompeii. Led by Field Museum Curator Jonathan Haas, PhD, and Northern Illinois University Professor Winifred Creamer, PhD, a husband and wife team, the tour will explore one of Europe's most historically complex and culturally diverse regions. As Dr. Haas explained, "Sicily is known as the crossroads of civilization. It is one of those corners of the world that offer great insights into patterns of society and civilization that cut across the boundaries of time and cultures."

A fitting companion to *Pompeii: Stories from an Eruption,* an exhibition about the eruption of Mount Vesuvius opening Oct. 22, the Crossroads tour will take place Oct. 22 to 31. It will commence in Palermo, with excursions to Cefalu, Agrigento and Taormina, to name a few. Participants will visit magnificent Greek and Roman ruins, some of the best-preserved architectural sites in the world, and learn about the origins of government and the development of complex societies. Mount Etna, striking archaeological museums and spectacular Norman cathedrals will serve as backdrops for discussions about the rise of civilization. The optional two-day tour extension to Naples and Pompeii will bring the tour full circle, as an ancient civilization is viewed alongside a bustling modern metropolis.

Crossroads of Civilization promises to be a wonderful and enlightening journey. To learn more about the tour and other unique opportunities available exclusively to Founders' Council members, please contact Monica Cawvey at 312.665.7773.



MINISTERO PER I BENI E LE ATTIVITA CULTURALI-SOPRINTENDENZA ARCHEOLOGICA DI POMPEI

The forum at Pompeii.

Remembering Rainer

Ray Troll, Artist
Illustrations and images © Ray Troll

My friend and mentor, Rainer Zangerl, PhD, died last year at age 92. He was appointed as curator of fossil reptiles at The Field Museum in 1945, and served as the geology department's chair from 1962 until his retirement in 1974. He continued his research and publishing until the last year of his life.

I'm a fish-obsessed artist living in Alaska, so it's unusual that I would befriend a retired scientist living on an Indiana farm. But when your work leads to the obscure netherworld of prehistoric sharks, there are only a handful of people to turn to.

I saw a profoundly puzzling fossil shark at the Natural History Museum of Los Angeles County in 1993. *Helicoprion* looks like a spiral snail shell at first, but a closer look reveals finely serrated shark teeth that decrease in size as the coil winds inward. I wondered how the teeth grew and how it ate, yet even though *Helicoprion* had been discovered more than 100 years before, few scientists had studied it, and no artists had portrayed it accurately.



Ornithoprion, *Dr. Zangerl's favorite animal that he had discovered.*



Ray Troll, right, with Dr. Zangerl at his Indiana farm.

I called Dr. Zangerl out of the blue, and we talked for hours about the lost world of Paleozoic sharks. I distinctly remember the "aha" moment when he told me that teeth grow in fully formed and do not increase in size with age. Amazingly Helicoprion kept all its teeth from birth to death and simply coiled them into its jaw; the baby teeth were at the center of the vortex. Dr. Zangerl laughed when I wisecracked that this was the only animal in the history of life to cheat the tooth fairy.

Dr. Zangerl told me about even weirder sharks that once inhabited North America, and I began drawing them. I visited him in 1994, an unforgettable time discussing the wonders of life on our planet, eating his tasty homemade bread, and hunting for fossils in his front yard. (Not surprisingly, Dr. Zangerl had built his home on a great fossil deposit.)

Dr. Zangerl emigrated from Switzerland in 1939. He had a wonderful way with words, trilling his Rs and describing ancient sharks as "fierce cr-r-r-itters." He published more than 60 scientific papers on a variety of subjects and wrote a now-classic memoir on the Pennsylvanian black shales that permeate the Midwest. Over a steak dinner at a roadside diner, he casually mentioned that he had translated Willi Hennig's *Phylogenetic Systematics* with a friend in the 1960s—triggering a revolution in systematic biology.

Dr. Zangerl pointed out several Indiana quarries where he had split thousands of rocks in search of ancient life. Like a 5-year-old school kid at the master's knee, I asked which was his favorite of all the fantastic animals he had discovered. Without hesitation he said, "*Ornithoprion*, a very strange cr-r-r-itter indeed. It had a pointed snout and a lower jaw shaped like a bony probe. All we ever found was the head, but what a head it was!"

Inspired by my sojourn to old "Dr. Z," I drew like a madman back in Alaska and took extra care in reconstructing *Ornithoprion*. I sent him some copies and cautiously called a week later. "Well, um … what did you think of the drawing?" I asked. "It's absolutely perfect. You really brought zat cr-r-r-itter to life," he trilled. Now, every time I look at that drawing, I remember my pal, Dr. R-r-r-ainer Zanger-r-r-l, and smile.

Visit www.trollart.com to see Ray Troll's quirky drawings and paintings based on the latest scientific discoveries in ichthyology and paleontology.

Make Room for Sue—in Your Hotel!

To celebrate Sue the *T. rex's* 5th birthday, The Field Museum and The Ritz-Carlton Chicago are unveiling a Sue Room package for dinosaur lovers of all ages!

Guests will receive a special Sue-inspired gift at check-in, and dino-decorated accommodations featuring framed Sue wall posters, dinosaur-themed toss pillows and toiletries and a dramatic nine-foot-tall talking *Tyrannosaurus rex* cut-out! Children 12 and under also enjoy complimentary in-room dino dining. And when it's time to hibernate, just hang the "Do Not Disturb: Dinosaur Sleeping" sign on the door for a little post-primordial shut-eye.

For more information or to make a reservation, call The Ritz-Carlton Chicago at 800-806-9232.



DIANE ALEXANDER WHITE

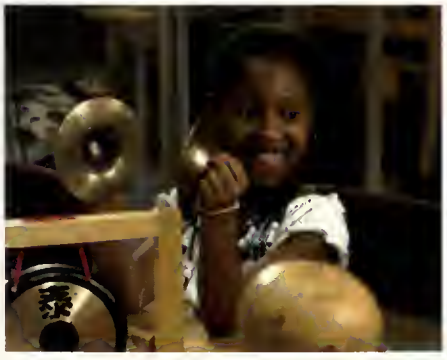
Fossil hunter Sue Hendrickson checks out the Sue Room inhabitants.

Mark Your Calendars For Donor Appreciation Night

Summer is the perfect time for us to thank all of our Annual Fund donors. You will soon receive your invitation to The Annual Fund Donor Appreciation Night, Aug. 18. It offers a wonderful opportunity to view *Dinosaur Dynasty: Discoveries from China*. We hope that you will take full advantage of your benefits this summer including free admission, special exhibition tickets and guest privileges. For more information on The Annual Fund, call 312-665-7777 or email annualfund@fieldmuseum.org.

New Field Ranger Program

Want to help your kids get the most out of their visit to the Museum? Enroll them in our new Field Ranger program! They'll get an activity-filled passport that guides their exploration of our exhibitions and their participation in our exciting family programs. They'll search out clues and answers to riddles in some of our most popular exhibitions, like *Inside Ancient Egypt* and the *Pawnee Earth Lodge,* take part in Story Time or our hands-on Interpretive Stations, and receive stamps for each right answer and each program they attend. Gather up a number of stamps from program facilitators or any of the Ranger Stations, and get a special Field Museum prize! Cost for each child's Field Ranger membership is $10 in addition to Family membership fee. Ask about it at the Museum's membership desk. For more information, please call 312.665.7700.



DAVID RIGG/GN90738.0100D

Field Rangers earn stamps in their passports by participating in hands-on activities.

Pompeii Member Tickets Now Available

On May 31, members may begin to reserve their free member tickets to view *Pompeii: Stories from an Eruption.* The tickets may be used for viewing the exhibition during public hours Oct. 22 through March 26, 2006. Call 312.665.7705 for the member ticketing hotline. Field Museum members also have the choice of using their *Pompeii* tickets during the members-only viewing dates scheduled for late October. Tickets for those dates will not be available until four weeks prior and are available on a first come, first served basis. Information about members-only viewing will be mailed in Sept.

Rebuilding Your Museum

Enjoy The New Terrace

The Museum's southeast terrace has reopened as an exciting venue for activities and family summer fun! The *Sue Discovery Dig* inaugurates the new space.

The terrace was closed in Sept. 2001, when construction of the underground Collections Resource Center (CRC) began. At that time, workers removed and numbered the terrace's original marble stairs, balusters, and other stone components for storage off-site. While construction of the CRC progressed, experts cleaned and rehabbed the marble, cutting damaged stones into smaller pieces for reuse.

When the roof of the CRC was built last year, plans called for two layers of water-proofing to assure that moisture from the outside terrace would not damage the invaluable collections stored below. The terrace was then rebuilt in the Museum's classic architectural style using over 6,000 pieces of rehabbed and new marble and 10,000 granite pavers. A ramp leading from the new east entrance makes the terrace fully accessible for persons with disabilities.

This summer, landscapers will add the finishing touches by planting 18 shade trees at the sidewalk level and 22 more trees in raised planters on the terrace. The terrace is a wonderful spot for relaxing outside when visiting The Field Museum—it's the place to be this summer!



JOHN WEINSTEIN/GN90748 055D

Preparing the terrace for landscaping.

The framework for the Sue Discovery Dig *tent rises on the southeast terrace.*



JOHN WEINSTEIN/GN90748 121D



JOHN WEINSTEIN/GN90748 047D

Marble balusters were cleaned and reinstalled.

IN THE FIELD

Fall 2005
September–
November

The Field Museum's Member Publication

New Pompeii Exhibition

The Search for the Ivory-billed Woodpecker

Rebuilding Science in Iraq



Better Than Ever



JOHN WEINSTEIN /GN88119.6

Our east entrance is now open! Aside from serving as a beautiful "front door" to the Museum Campus, the new entrance fills other important needs. It graciously welcomes all visitors, including the disabled, by providing universal access. It also serves as our new point of entry for school groups and instills students with a sense of wonder as they prepare to experience our exhibitions.

On the evening of June 6, the Museum held a ribbon cutting to celebrate. Special guests included Marca Bristo, president and founder of Access Living Chicago and former chair of the National Council on Disability. Marca thanked the Museum for including the disabled community in the planning of the new entrance. In turn, we are grateful to Marca for her early and outspoken support of the project at both the city and state levels. Henry Betts, MD, chair of the Rehabilitation Institute Foundation and past president and CEO of the Rehabilitation Institute of Chicago, also complimented the Museum, saying that projects such as ours help improve the lives of disabled citizens. Tim Mitchell, general superintendent and CEO of the Chicago Park District, also spoke and he and his department were recognized for their invaluable assistance. Helping us at the ribbon cutting were Kelly Naughton, a Field Ambassador teacher from Chicago's Bridge Elementary School, and her student Michal Tutka. They were the first teacher and student to cross the threshold. In coming years, millions more will follow to begin their school fieldtrips in this inspiring place.

The new east entrance is a beautiful addition to The Field Museum.



JOHN WEINSTEIN GN90785/064D.TIF

After the ribbon cutting, trustees and guests flowed into the wide, spacious hall that links the east entrance to the rest of the Museum. As they enjoyed refreshments and educational demonstrations, many commented that the room is among the city's most attractive new venues for parties and receptions. In fact, at the time of the ribbon cutting, our special events department had already booked the east entrance and hall for several after-hours events! We're already realizing the full potential of the new space.

With the opening of the east entrance, the rebuilding and landscaping of the nearby southeast terrace, and the opening of the new exhibition *Pompeii: Stories from an Eruption* (Oct. 22), we're confident that you'll agree—a visit to The Field Museum is better than ever.



JOHN WEINSTEIN GN90765/204D.TIF

Marca Bristo speaks to guests gathered inside the east entrance.

Finally, this month we will dedicate the new Collections Resource Center (CRC), the 180,000-square-foot facility built underground to house over two million specimens and artifacts from our collections. Later this fall, we plan to begin the enormous task of moving into this area where researchers from around the world will come to study our collections. Perhaps the next time you're here, you'll catch a glimpse of Museum staff members transporting large dinosaur fossils, ancient sculptures, or jars of fish specimens into the CRC!

John McCarter

John W. McCarter, Jr.
President and CEO

What do you think about In the Field?

For general membership inquiries, including address changes, call 866.312.2781. For questions about the magazine In the Field, call 312.665.7115, email noshea@fieldmuseum.org, or write Nancy O'Shea, Editor, The Field Museum 1400 South Lake Shore Drive, Chicago, IL 60605-2496.

INTHEFIELD

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Cover: *Pompeii: Stories from an Eruption*, which opens Oct. 22 and runs through March 26, 2006, features artifacts including an image of Nero as Apollo, part of the fresco from the building of the Triclinium in Moregine, and a mosaic showing the mask of a gorgon from the House of the Centenary in Pompeii. The exhibition tells the story of the treasures of Pompeii and the human drama surrounding the eruption of Mount Vesuvius in 79 A.D. Photos: Ministero per I Beni e le Attivita Culturali—Soprintendenza archeologica di Pompei and Soprintendenza per i beni archeologici di Napoli e Caserta

The Field Museum salutes the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District.

The Field Museum

1400 South Lake Shore Drive
Chicago, IL 60605-2496
312.922.9410
www.fieldmuseum.org



MIMMO JODICE



DIANE ALEXANDER WHITE



THE FIELD MUSEUM AND OPPENHEIMER EDITIONS

2

Pompeii: Stories from an Eruption tells about the people who lost their lives, and the vibrant society that was destroyed, in the eruption of the world's most famous volcano.
Top: The exhibition features art and artifacts from Pompeii.

4

In a conversation, a Field Museum herpetologist discusses why and how she utilized a new technique when mapping the evolutionary history of a poorly known group of reptiles.
Center: Maureen Kearney, PhD, in her laboratory.

16

A former resident at The Field Museum recently helped Iraqi scientists begin to rebuild their country instead of building weapons.

18

Two Field Museum bird experts paddled through the swamps of Arkansas hoping to spot the Ivory-billed Woodpecker, once thought to be extinct.
Bottom: The bird is described as "almost mythical."

Museum Campus Neighbors

Adler Planetarium *Lost Spacecraft: Liberty Bell 7 Recovered* lands at the Adler on Oct. 1. *Lost Spacecraft* is a special interactive exhibition of the 1961 Mercury space capsule recovered from the Atlantic Ocean floor in 1999. Visitors can train like astronauts in the centrifuge test facility, a pod that replicates a real space launch by spinning visitors up to two G-forces, or rocket 118 miles up into space and then plunge three miles below the ocean's surface in the capsule simulator. The exhibition runs through Jan. 8. Visit www.adlerplanetarium.org or call 312.922.STAR.

Shedd Aquarium Sometimes it's fun to be crabby—when you visit Shedd's *Crabs!* special exhibition. Before armored tanks and all-terrain vehicles, before exploratory robots and Swiss Army knives, there were crabs. Meet more than 50 species of these 10-legged wonders, from the delicate porcelain crab to the formidable Tasmanian king crabs. You'll be amazed at the diversity, agility, adaptability and beauty of these creatures. *Crabs!* continues through Jan. 8. For more information, visit www.sheddaquarium.org or call 312.939.2438.

Pompeii: Stories from an Eruption

Stephany Schings, Writer

A fearful black cloud was rent by forked and quivering bursts of flame, and parted to reveal great tongues of fire.... Darkness fell, not the dark of a moonless cloudy night, but as if the lamp had been put out in a closed room. You could hear the shrieks of women, the wailing of infants, and the shouting of men... Many besought the aid of the gods, but still more imagined there were no gods left, and that the universe was plunged into the eternal darkness." — *Letter from Pliny the Younger to the historian Tacitus, A.D. 79*

Despite the earthquake that had leveled much of the city 17 years before, people continued living in and around Pompeii, in the shadow of Mount Vesuvius. But on Aug. 24, in A.D. 79, when the ground began to rumble and a dark column of smoke and debris suddenly arose from the tree-covered mountain, the people of Pompeii and its neighboring settlements could not escape their tragic fates.



Architectural images show ruins of Pompeii and Herculaneum. Frescos, jewelry and decorative objects are among the artifacts featured in the exhibition.

Pompeii: Stories from an Eruption, opens at The Field Museum on Oct. 22 and runs through March 26, 2006. The exhibition gives the account of the vibrant people and society that were buried by the historic eruption of Mount Vesuvius nearly 2,000 years ago.

Through the remains of the beautifully painted frescos and objects—both magnificent and everyday—found beneath the rubble, the exhibition shows how the average person in Pompeii lived; through casts of the bodies of those killed in the eruption, it shows how they died—fleeing the cities with family, huddled in corners next to loved ones, and clinging to their most important possessions.

"Everyone has heard about Pompeii," said Francesca Madden, the exhibition's project manager. "I think it's very important for us to tell the human story."

Three Distinct Areas

Pompeii: Stories from an Eruption looks at three distinct areas around Mount Vesuvius: Herculaneum, an elite resort community; Oplontis, with its luxurious villas in the agricultural areas located outside the larger cities; and Pompeii itself, a bustling commercial town, comprising busy shops, inns, restaurants and the extravagant homes of the wealthy.

In the first century A.D., the fertile land at the foot of Mount Vesuvius was a valuable agricultural resource for the area around the Bay of Naples. The region's ports served both military and commercial purposes, and were used to transport the fine wines and olive oils the region exported. The beautiful countryside also enticed the wealthy to build magnificent villas and gardens there. These beautiful estates, however, would not withstand the torment that would fall upon them.

The Fateful Eruption

At around noon on Aug. 24, residents of Pompeii looked to the sky to see the first phase of Vesuvius's eruption. An ominous cloud darkened above the mountain as a light rain of ash and pumice began to fall. Many took refuge indoors, hoping to escape the looming dangers.

"They had no clue what was going on," Madden said. "They had never experienced anything like that."

Violent earthquakes and intense darkness followed the rain, and within four or five hours, roofs began to collapse under the weight of the mounting ash and stone, crushing those hiding in their homes.

During the night, the second phase of the erup-

tion began. The dark cloud that had appeared earlier began to collapse, sending steaming-hot pyroclastic surges—glowing clouds of gas and ash—hurtling down the slopes of Vesuvius at speeds of over 60 miles per hour. Those who had survived the first phase of the eruption were felled by the surges that tore through Pompeii, suffocating the living and burying the entire city beneath nearly seven feet of volcanic matter.

In the early morning of Aug. 25, the devastation struck Herculaneum in the form of another pyroclastic surge. By this time, many residents of Herculaneum had fled the city, but some remained at the seashore, waiting to escape by boat. Here, in the seaside arcades, hundreds found themselves trapped between the ocean and the deadly hot volcanic gases. They carried lanterns to light their way through the dense ash and blackened sky, but they could not escape the surges that eventually buried the city beneath 75 feet of dense volcanic material.



Though both cities were devastated in these horrific hours, each experienced very different destruction. While the accumulations of ash and lapilli (small volcanic pebbles) crushed many of the residents of Pompeii in the initial phases of the eruption, the deadly gases that followed likely burned those who sought shelter in the arcades of Herculaneum. "Due to their distinct locations in relation to the volcano, each site was affected in a different way, so people died in different ways," Madden said.

Buried Lives Recovered

The eruption of Vesuvius may have destroyed the cities and their people, but it also helped to preserve them. By injecting plaster and other materials into the hollows left behind in the hardened ash after the bodies of the victims deteriorated, scientists have been able to create human casts, 12 of which will be displayed in the exhibition. These casts provide scientists with important information about how the victims died, and give visitors a personal glimpse into the final terror-filled moments of those fleeing—or waiting for—eventual death.

Within the exhibition, a collection of the possessions these people carried, as well as the art and objects they left behind, gives additional clues about the lives of the victims and their final hours. The stunning wealth of Herculaneum is presented through beautiful sculpture, gold jewelry, and coins.

"We try to emphasize individual stories...so that at every site, visitors can say, 'Here's where I am and here's what happened at this place, and these are the objects that were found there,'" said Matt Matcuk, PhD, exhibition content developer.

Architectural elements within the exhibition, such as the arches used in the Herculaneum area, help suggest how the cities may have actually felt. In addition, more than 10 stunning large-scale paintings are exhibited. These colorful frescos illustrate scenes of gods and goddesses, sumptuous gardens, heroes from ancient literary sources, and mysterious religious rites, providing a rich background for the lives of the people.

The exhibition explains how volcanoes such as Vesuvius are formed, how they wreak their destruction, and the warning signs that may have been present before the eruption. It also includes an update on Mount Vesuvius and the region surrounding it, and provides a look into what the future may hold for the residents of the towns and cities that to this day, nestle on the slopes of Mount Vesuvius.

The exhibition was organized by the Ministero per i Beni e le Attivitá Culturali, Soprintendenza archeologica di Pompei, Soprintendenza per i Beni Archeologici delle province di Napoli e Caserta, Regione Campania. ITF

Presented by Harris Bankcorp Inc.

This exhibition is supported by an indemnity from the Federal Council on the Arts and the Humanities.

Photos of archaeological sites courtesy of Matt Matcuk, The Field Museum.

Photos of artifacts ©Ministero per i Beni e le Attivita Culturali—Soprintendenza archeologica di Pompei and ©Ministero per i Beni e le Attivita Culturali—Soprintendenza per i beni archeologici di Napoli e Caserta.

Field Museum Herpetologist Advances Knowledge of Rare Reptiles

A Conversation with Maureen Kearney

Nancy O'Shea, Editor

Field Museum herpetologist Maureen Kearney, PhD, is investigating the evolutionary history (phylogeny) of worm lizards, a poorly known group of burrowing reptiles that live primarily underground. In a recent advance in understanding the evolutionary history of these unusual animals, she utilized a new protocol to extract DNA from decades-old museum skeletons and specimens preserved in alcohol. The DNA data were used in a phylogenetic analysis published in the *Proceedings of the Royal Society of London* in 2004. *In the Field* talked to Dr. Kearney about her work and its implications:



Maureen Kearney, PhD, utilized a new technique when investigating the evolutionary history of worm lizards.

DIANE ALEXANDER WHITE

ITF: Most people are unfamiliar with worm lizards. Where do they live and what do they look like?

Dr. Kearney: Worm lizards, or amphisbaenians, live in areas of the neo-tropics, sub-Saharan Africa, the Caribbean Islands, parts of the Mediterranean and Middle East, Baja California and Florida. They are rarely seen in the field unless you deliberately search for them in particular habitats that are appropriate for their tunnel systems—and even then they are very hard to find! Sometimes they are discovered accidentally by farmers while plowing, or by construction workers during earth-moving operations. There are about 160 species, and most of these are limbless and elongate, or superficially "snake-like." Because they tunnel through soil head-first, one of the most interesting aspects of their anatomy is the variety of bizarre head shapes—spade, keel, shovel and round—that have evolved in different species, each used in a certain type of burrowing behavior.

ITF: Why not just compare the anatomy of different species to learn how they evolved?

Dr. Kearney: I did, and this provided a lot of valuable data for phylogenetic studies. But phylogeneticists often try to collect multiple, independent data sets—anatomical, genetic, etc.—for more powerful phylogenetic analyses. Also, worm lizards have a highly modified anatomy that makes them a little difficult to compare to their closest relatives. And, when I first started researching this group, I knew that evolutionary convergence might be possible in these animals, a factor that can sometimes pose some challenges for phylogenetic analysis.

ITF: What do you mean by evolutionary convergence?

Dr. Kearney: Evolution sometimes repeatedly, or convergently, shapes similar-looking organisms that occupy similar habitats or use similar behaviors, but the organisms may—or may not—be closely related. A classic example is the independently evolved but similarly shaped bodies of whales and fishes.

ITF: Were there other reasons why you wanted to go beyond the anatomical comparisons?

Dr. Kearney: Worm lizards also seem to represent a good example of mosaic evolution—mosaic because some features that are retained relatively unchanged from the ancestral condition appear primitive, while others that are much more modified appear new or derived. Mosaic evolution just means that different features can evolve at different rates. As an example, certain fossil snakes appear primitive because they have small hind limbs, yet their skulls are highly derived and very similar to those of pythons. A similar mosaic evolutionary pattern can be seen in many species of worm lizards—and that presents another potential challenge for interpreting their phylogenetic relationships. That's not to say that the anatomical data aren't valuable or useful—they definitely were and, in fact, certain pieces of the phylogenetic puzzle can only be solved based on anatomical comparisons—but we like to use as much data from as many different sources as possible to conduct phylogenetic analyses.

ITF: And so it was necessary to study their DNA?

Dr. Kearney: DNA sequencing offered another, independent data set for testing phylogenetic theories. But, because the animals are rare and there are few fresh tissue samples available, [Field Museum] graduate student Bryan Stuart and I began a project to try to extract DNA from preserved Museum specimens. We knew this would be quite a challenge, though.

ITF: You said that worm lizards are rare, so aren't Museum specimens rare too?

Dr. Kearney: Yes, but the work was made possible by the recent donation of a valuable collection of worm lizard specimens by Carl Gans [PhD], a renowned herpetologist who recently retired after decades of research and fieldwork all over the world. The specimens, now in the collection of The Field Museum's division of amphibians and reptiles, were vital to our research. They will also continue to contribute to future studies—for example, studying what worm lizards feed on underground, how their reproductive system compares to that in other lizards, and other evolutionary and ecological questions about organisms that live in a subterranean environment.

ITF: Why was it hard to extract DNA from specimens preserved for many years?

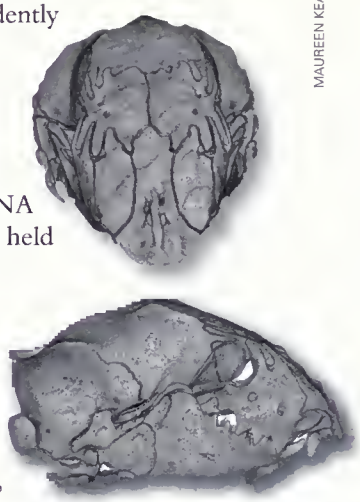
Dr. Kearney: Preserving specimens can "lock up" DNA or destroy it altogether. We experienced quite a few failures in the laboratory before we were finally successful in gathering useable DNA from these specimens.

ITF: How did you do it?

Dr. Kearney: Basically, we modified a forensic technique that had previously been developed to obtain DNA from human skeletal remains, and worked in careful conditions to control against contamination.

ITF: Modifying a forensic technique sounds like *CSI*! What did your research reveal and how will your discovery impact future studies?

Dr. Kearney: Worm lizards may not be "*CSI*-glamorous" to most people! But these kinds of phylogenetic studies on organisms that live in different environments can provide some insight about evolutionary biology in general. For instance, our results indicate that limb loss and extreme head modifications evolved multiple times independently in animals living on different continents. In other words, these traits are evidently somewhat "plastic" over evolutionary time. In addition, we hope our methods will be of use to other scientists working on other groups, hopefully leading to more studies based on DNA extracted from the large number of specimens held in museums worldwide.



MAUREEN KEARNEY

Above: CT scan images of the worm lizard shown in photo (below left) depict the spade-shaped skull modification for burrowing.

ITF: What's your next project?

Dr. Kearney: I'm working on a project on the origin of snakes, and also working on a larger, more inclusive, Tree of Life project for squamate reptiles (which include snakes, worm lizards, and other lizards). This is a large, collaborative project including anatomists, molecular biologists, and paleontologists from various institutions who are studying the evolutionary history of the over 7,000 species of squamate reptiles known today. By working together with diverse sources of data and various areas of expertise, we can better understand the evolution of squamate reptiles (the second largest group of terrestrial vertebrates), and build a more complete picture of vertebrate evolution and ecology. ITF

'...we hope our methods will also be of use to other scientists ... leading to more studies based on DNA extracted from the large number of specimens held in museums worldwide.'



DANNY FIDLER



L. LEE GRISMER

Left: Worm lizards are a poorly known group of reptiles that live in sandy soil. Right: Most worm lizard species are limbless, but some have small front limbs.

Strengthening Museum Relationships with Chicago Area Schools

Tiffany Plate, Writer

Last May, some 70 Chicago area teachers gathered at The Field Museum for a Year-End Celebration. They shared stories and fieldtrip ideas, and reflected on their first year as Field Ambassadors—teachers who partner with the Museum's Education Department in order to promote their schools' use of Museum resources. Since the program's founding in 1999, many new teachers have joined the Field Ambassadors' ranks each year, swelling the group's current number to more than 330.



JOHN WEINSTEIN/GN90765/178D

Field Ambassador Kelly Naughton (center, back row) and her students from Chicago's Bridge Elementary School attended the east entrance opening event.

Chicago area schools are facing intense performance pressures and funding shortages; the need for effectively linking schools with museums and providing high-quality professional development for teachers is more urgent than ever. The Field Museum is taking a leadership role in providing free or low cost resources to urban schools through the Field Ambassadors program, generously supported by Polk Bros. Foundation.

Field Ambassadors are teachers selected from numerous applicants to become liaisons between the Museum and their schools. During the school year they attend forums to explore the Museum's collections, meet Museum scientists, and learn how to craft customized and focused field trips. Ambassadors also get a first-hand look at how to use Museum resources—like Harris Educational Loan materials and the Soil Adventure Mobile—in their classrooms. Ambassadors can also take advantage of special discounts on professional development programs such as customized Museum-based in-service programs and exhibition previews.

While these teachers gain insight on how to use the Museum as an extension of their classroom, the Museum leverages the expert knowledge Ambassadors can provide. Field Ambassadors often help guide the development of new exhibitions and assist in creating accompanying educator guides and Harris Loan materials. They test teacher-focused websites and suggest ways the Museum can update and improve its professional development programming, including the Field Ambassadors program itself. This year, Ambassadors began co-teaching educator workshops with Museum educators, creating valuable peer-to-peer relationships.

Perhaps the most exciting outcome of the program is seeing the Ambassadors make innovative use of Field Museum resources, and motivating their colleagues to do the same. For instance, inspired by their Ambassador's passion for museum-based education, the entire faculty of one school district—160 teachers and administrators—visited The Field Museum to gain in-depth knowledge of the Museum's resources. It was the first time this school district had participated in an in-service at the Museum, and it marked the revitalization of the district's fieldtrip program. In numerous other instances, Ambassadors have developed new and interesting lesson plans centered on the Museum's Harris Loan "experience boxes" and other materials.

Strengthening Relationships

The Field Ambassador program has now concluded its sixth year and its first phase. The Ambassadors are well equipped to use creative thinking and the Museum's informal education resources to inspire their students to be lifelong learners. In the second phase of the program, the Museum will focus on strengthening existing relationships with Ambassadors and their schools. Through the recent addition of forums for Ambassador school principals, the Museum will increase its presence in selected schools. The Museum will partner with 11 schools and will give them customized field trip planning advice. In addition, the schools' faculties will be given discounts to professional development programs and free admission to the Museum's members' nights. This new "Core Partners" program is The Field Museum's next step in building bridges to Chicago area schools.

YOUR GUIDE TO THE FIELD

Calendar of Events for Fall 2005 September–November

Inside: Exhibitions Festivals Family Programs Adult Programs

Programs at a Glance

Details inside!

Family Programs

Dino Discovery Workshop *9/10 & 17*

Cultural Connections Kickoff *9/21*

Ensemble Español Performance *10/1*

Pompeii Daily Life Family Workshop *11/5 & 11/12*

Behind the Scenes *11/18*

Family Overnight *11/18*

Lewis and Clark Activities *11/19*

Adult Programs

Real Eve Lecture *9/7*

FM Research in China Lectures *9/10–11/5*

Americas Course/Dickson Mounds Fieldtrip *9/28–10/19*

Larson Quarry Fieldtrip *10/1*

Wheel Estate Lecture *10/8*

Spencer Lucas Lecture *10/8*

Asian Geographical Changes Workshop *10/8 or 11/19*

David Restoration Lecture *10/22*

Sandhill Cranes Fieldtrip *10/29*

Egyptian History Course *11/1–12/13*

Pompeii's Cultural History Lecture Series *11/2–12/7*

National Geographic Live! Series

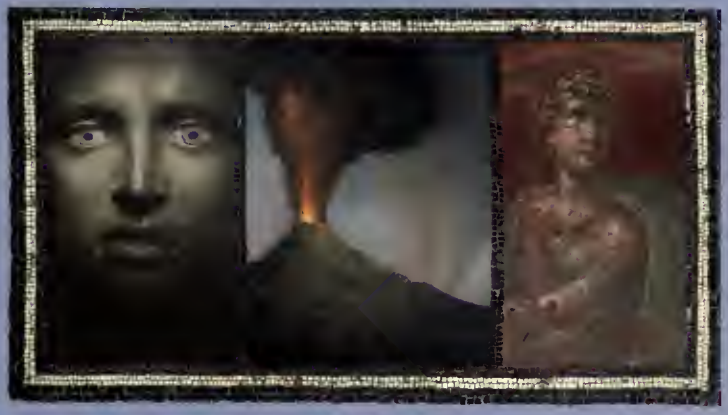
Guns, Germs and Steel *10/11*

Lost Treasures of Afghanistan *10/25*

In the Shadow of the Sunfish *11/15*

Piranhas, Grizzlies and Flesh-Eating Pigs *12/6*

New Exhibition



POMPEII

Oct. 22, 2005–March 26, 2006

Two thousand years ago a vibrant society disappeared beneath the ashes of Vesuvius. Now you can uncover its buried treasures—and its human drama—at The Field Museum.

The exhibition was organized by the Ministero per i Beni e le Attivitá Culturali, Soprintendenza archeologica di Pompei, Soprintendenza per i Beni Archeologici delle province di Napoli e Caserta, Regione Campania.

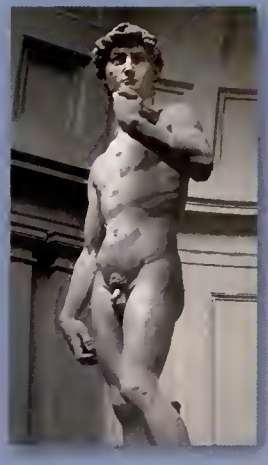
Presented by Harris Bankcorp Inc.

This exhibition is supported by an indemnity from the Federal Council on the Arts and the Humanities.

Featured Lecture

The Restoration of Michelangelo's David

Cinzia Parnigoni, Lead Restorer



Ever wondered what it takes to restore an ancient work of art? Parnigoni, the lead restorer during the recent clean-up of the world's most famous statue, will detail the restoration team's work and then discuss controversies over the team's methods of cleaning. Please note: this lecture will be given in Italian and translated into English.

Saturday, Oct. 22, 2pm
$16, students/educators $14, members $12
See inside flaps for more dynamic Pompeii: Stories from an Eruption *programs.*

Additional support for Public Programs provided by the Consulate General of Italy in Chicago and the Istituto Italiano di Cultura in Chicago.

The Field Museum

General Museum Information: 312.922.9410

Family and Adult Program Tickets and Information: 312.665.7400

Please note: Refunds will be issued by Field Museum staff, minus a $10 processing fee, for family overnights only. No refunds or exchanges are permitted for any other programs. Fees for programs cancelled by The Field Museum will be refunded in full.

Discover a whole new world of dinosaurs

DINOSAUR DYNASTY 恐龍
Discoveries from China

Through April 23, 2006

Meet dinosaurs you've never seen before, when *T. rex* Sue's friends come to visit—all the way from China! These authentic fossils and life-size casts come from one of the world's hottest spots for dinosaur research.

Take a closer look at Asian dinosaurs and their environment through these fascinating programs. Call 312.665.7400 to register.

This exhibition was produced by DinoDon, Inc., in cooperation with Beringia Ltd. and the Inner Mongolian Museum.

Family Workshop

Dino Discovery

Richard Kissel, FM Exhibitions Dept.

Think you know your dinosaur trivia? Put your knowledge to the test in these fascinating workshops exploring the difference between Asian dinosaurs and North American dinosaurs, determining the similarities of dinosaur eggs and contemporary eggs, and comparing common physical characteristics of these ancient creatures.

For families with children ages 7–12.
Saturdays, Sept. 10 and 17, 10–11:30am
Each session: $15, member $12



COURTESY TAMMY HAGGERTY-JONES

Adult Workshop

Asian Geographical Changes

Follow the continental shifts of dinosaur-era Asia and decipher how the geography of this great continent has influenced its fossil record.



FM/LAUREN MILLS

Rudyard Sadleir, University of Chicago
Saturday, Oct. 8, 11am–2pm
OR
Christian Kammerer, University of Chicago
Saturday, Nov. 19, 11am– 2pm
$15, members $12



FMXU XING

Adult Lectures

Field Museum Research in China

Presenters include FM staff Dr. Peter Makovicky, Dr. Lance Grande, Geology; Richard Kissel, Exhibitions

Take a tour of some of China's most fascinating sites with Field Museum researchers. Follow paleontologists inspecting dinosaur fossils and an anthropologist studying ancient Chinese societies. Check our website for complete lecture schedule.

Saturdays, Sept. 17, Oct. 22, and Nov. 5, 2pm
Free with Museum admission

Understanding Geological History Through Fossils

Spencer Lucas, University of New Mexico

Learn about China's extensive vertebrate fossil record, which Lucas has spent years cataloging. You'll see how unique atmospheric conditions in China's history have combined to create a complex geology that can tell us much about vertebrate evolution.



COURTESY OF SPENCER LUCAS

Saturday, Oct. 8, 2pm
$16, members $14, students/educators $12



Journey to ancient Pompeii

These programs offer fun, fact-filled adventures for visitors of all ages!



©MINISTERO PER I BENI E LE ATTIVITÀ CULTURALI—SOPRINTENDENZA ARCHEOLOGICA DI POMPEI

Lecture Series

Pompeii's Cultural History

Investigate the fascinating events of life in Pompeii before the tragic eruption of A.D. 79. In conjunction with University of Chicago's Graham School, this six-session series will feature presenters from all disciplines, including art historians, exhibition developers, and anthropologists.
Visit www.fieldmuseum.org for a complete list of presenters.

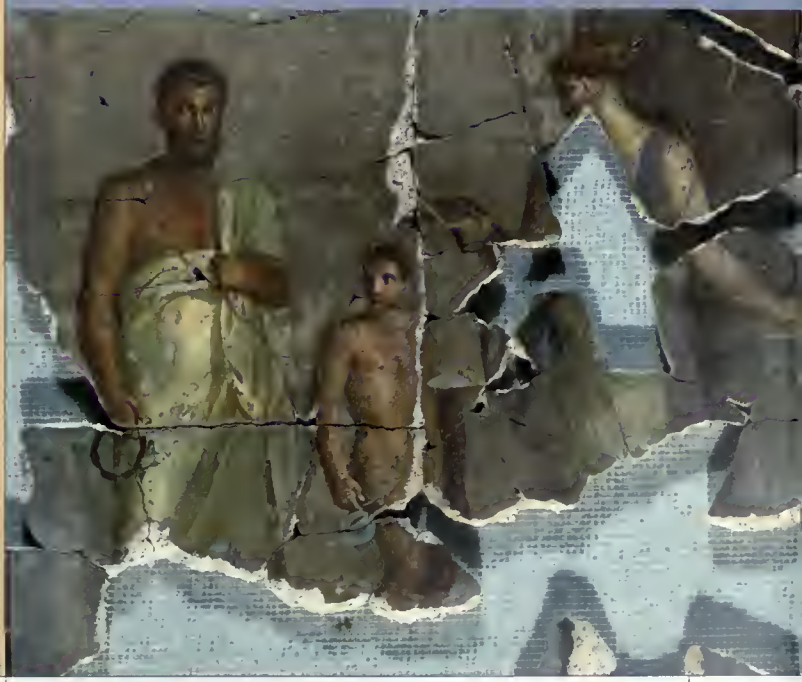
Wednesdays, Nov. 2–Dec. 7, 6pm
Full series: $82, students/educators $72, members $62
Any three lectures: $44, students/educators $38, members $32
Each lecture: $16, students/educators $14, members $12

Family Workshop

Daily Life in Pompeii and The Story of Vesuvius' Eruption

Spend a few hours in the sandals of an ancient Roman! This two-part workshop will trace daily life in Pompeii and examine the science behind Vesuvius' deadly eruption.

For families with children ages 7–12.
Saturdays, Nov. 5 and 12, 10–11:30am
Each session: $15, members $12
Does not include admission to Pompeii.



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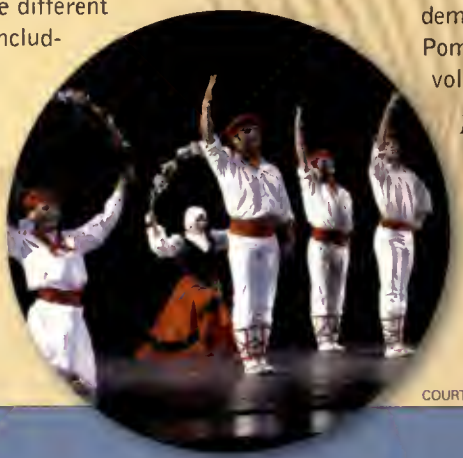
Family Programs

Family Performance

Spain's Dancing Rhythms

Step into the enchanting world of Spanish dance! Company members of the Ensemble Español Dance Theater in residence at Northeastern Illinois University, will treat visitors to lively and spirited dances that represent Spain's colorful traditions and dynamic history. Authentically costumed dancers will perform three different styles of Spanish dance, including Flamenco.

Saturday, Oct. 1, 1pm
Free with Museum admission



COURTESY OF ENSEMBLE ESPAÑOL

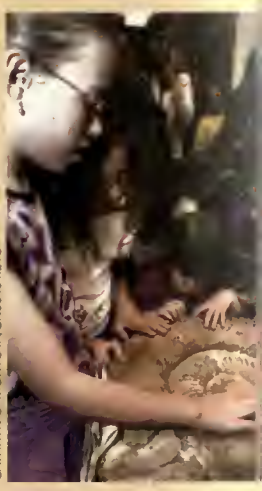
Family Behind the Scenes

From Magma to Lava

Dr. Phil Janney, FM Geology Dept.

Take a trip through the Museum's vast geological and anthropological collections to discover the science behind volcanoes. See artifacts that demonstrate what daily life was like in Pompeii, and examine a variety of volcanic rock specimens.

Friday, Nov. 18, 6–8pm
$15, members $12



CATHRYN C. MONTOYA/GN90454.21C

Adult Programs

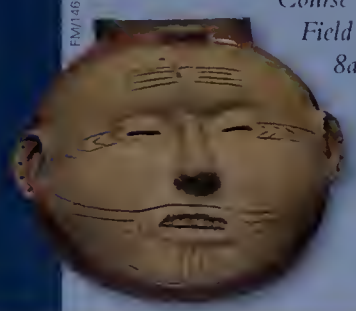
Adult Course/ Fieldtrip

Discover the Ancient Americas

Dr. Maxine McBrinn, FM Anthropology Dept.

Delve into the fascinating world of the ancient Americas, and visit surviving relics. This multipart adult course will explore the history of the people of the Americas, and give you a preview of the new Ancient Americas exhibition opening in 2007. Finish off the course by visiting the notable Dickson Mounds in central Illinois.

Wednesdays Sept. 28–Oct. 19, 6pm–8pm
Course and Fieldtrip: $110, members $100
Field trip only: Saturday, Oct. 15, 8am–6pm
$50, members $45

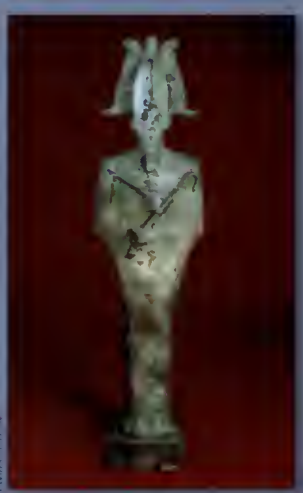


FM/146 50/92

Adult Course

Ancient Egyptian History: Sacred Things and Secret Places

Dr. Thomas E. Mudloff, Egyptologist



FM/A 1147 4

Venture into the world of ancient Egypt and uncover some of its deepest secrets. You'll discover hidden aspects of Egyptian religion and history, exploring the vast Karnak temple, the mysteries of Abydos, and the necropolis at Saqqara. You'll also descend into the royal underworld in the Valley of the Kings at Thebes to examine the changing secrets of the pharaohs' tombs. No previous knowledge necessary.

Tuesdays, Nov. 1–Dec. 13, 6–8pm
$85, members $72

Exhibitions

Below is a calendar of current and upcoming temporary exhibitions. Some dates may change. Visit our website at www.fieldmuseum.org or call 312.922.9410 as the date of your visit nears.

Pompeii: Stories from an Eruption
October 22, 2005–March 26, 2006

Jungles
Through January 1, 2006

Family Overnight

Dozin' with the Dinos

Sue the *T. rex* is having a sleepover! Join us for a night of family workshops, tours and performances. Explore ancient Egypt by flashlight, prowl an African savannah with man-eating lions and take a stroll through the Royal Palace in Bamun, Africa. Then spread your sleeping bag amid some of our most popular exhibitions. The event includes an evening snack and a light breakfast in the morning.

Families with children ages 6–12
5:45pm on Friday, Nov. 18 until 9am on Saturday, Nov. 19
$47, members $40



CATHRYN C. MONTOYA/GN90730.20C

Journey with Lewis and Clark



Follow the trail blazed by Lewis and Clark and the Corps of Discovery during the bicentennial celebration of their famous journey. Take a self-guided adventure through the Museum's exhibitions and discover the animals and people that Lewis and Clark encountered on their trip west. Hear storyteller Fox Ellis (above) talk about life on the frontier for the Corps of Discovery and the Native Americans they encountered. Then stop by an Interpretive Station to find hands-on examples of artifacts and specimens like the ones they gathered on their expedition.

Saturday, Nov. 19, 10am–2pm
Free with Museum admission

Adult Fieldtrips

Fossil Hunting at Larson Quarry

Dave Dolak, Columbia College

Reconstruct the Illinois landscape of 425 million years ago when a shallow, subtropical sea covered the area. You'll learn about the organisms that lived in this ancient environment and discover techniques for finding the fossils that time left behind.

Adults only please. Space is limited. Please register by Sept. 26.

Saturday, Oct. 1,
7:30am–2pm
$65, members $55



KATHLEEN DONOFRIO



JOHNWEINSTEIN/793877C

The Return of the Sandhill Cranes

Alan Anderson, Director, Audubon Society

Spend a day watching these extraordinary creatures in their natural habitat! Your day will begin at the Indiana Dunes, where you'll observe ducks, fall migrants and other birds. After lunch, journey to the Jasper-Pulaski Fish and Wildlife Area to look for birds during a stroll along a portion of the area's 8,220 acres. As dusk approaches, you'll see the cranes gather in adjacent fields.

Adults only please. Space is limited. Please register by Oct. 24.

Saturday Oct. 29, 10am–8pm
$70, members $60

Design Innovations in Manufactured Housing
Through January 16, 2006

Dinosaur Dynasty: Discoveries from China
Through April 23, 2006

Center for Cultural Understanding and Change (CCUC) Fall Highlights

How Do I Look?

Join Cultural Connections for the Kick-Off of its seventh year of dynamic cross-cultural programming. Over 20 ethnic cultural centers and museums will present *The Language of Looks*—how culture shapes appearance—from Chicago and around the world!

Wednesday, Sept. 21, 6–8:30pm
Call 312.665.7474 to register

Cultural Connections has received generous support from The Joyce Foundation, Kraft Foods, Richard H. Driehaus Foundation, and Charles and M.R. Shapiro Foundation.



JOHN WEINSTEIN/GN00499.018D

Tell the Story: The Chicago SNCC History Project, 1960–1965

CCUC is proud to be a community sponsor of this important two-day forum focusing on the seminal days of the civil rights movement and the impact of the Chicago Area Friends of the Student Nonviolent Coordinating Committee.

Conference will be held Oct. 21–22, Roosevelt University
For more information and registration, visit www.chicagosncc.org

Free Lectures

Wheel Estate: The Rise and Decline of Mobile Homes

Allan Wallis, Author

Travel back down the long road that has brought us the modern mobile home. Learn about how these innovative homes have consistently responded to market needs that have been unmet by conventional housing. Wallis will provide an engaging discussion of mobile home history and will be available to sign his recently published book on the subject.



TY ALAN WALLIS

Saturday, Oct. 8, 11am
Free with Museum admission

While you're here, visit the Marae Gallery to see Design Innovations in Manufactured Housing *exhibition.*

The Real Eve: Modern Man's Journey Out of Africa

Dr. Stephen Oppenheimer, Member Green College, University of Oxford

Join this world-renowned expert—known for tracking human migration through his clever use of human molecular DNA studies and the latest archaeological evidence—as he provides a ground-breaking account of the past 85,000 years of our human journey out of Africa to the farthest corners of the world.

Wednesday, Sept. 7, noon
Free with Museum admission

Transforming Tradition: Pottery from Mata Ortiz
Through May 31, 2006

NATIONAL GEOGRAPHIC LIVE!

Join us for our new fall series of adventure-filled presentations by world-renowned photographers, explorers and scientists.



NGT&F

Guns, Germs and Steel

Jared Diamond, Author

Join Diamond on a whirlwind tour around the world and across 13,000 years of history as he introduces his bold, thought-provoking ideas about the rise and fall of civilizations, and his controversial theories of "geography as destiny."

Tuesday, Oct. 11, 7:30pm

Lost Treasures of Afghanistan

Fred Hiebert, Archaeologist

Share in the dramatic rediscovery of priceless Silk Road artifacts thought lost after the 1979 Soviet invasion of Afghanistan. Hiebert will explain how these brilliant pieces represent a crossroads of ancient Mediterranean and Asian cultures.

Tuesday, Oct. 25, 7:30pm



KEN NEFF (GARNET)

In the Shadow of the Sunfish

Tierney Thys, Marine Biologist and Filmmaker

Weigh in with an expert on the world's heaviest bony fish, the mola. Hear about Dr. Thys' investigations of the movement of these ungainly creatures, which can weigh more than 5,000 pounds, and see how they can actually be quite graceful underwater.

Tuesday, Nov. 15, 7:30pm



MIKE JOHNSON



JOEL SARTORE

Piranhas, Grizzlies and Flesh-Eating Pigs

Joel Sartore, Photojournalist

Jump into the perilous hotspots where Sartore's extreme photography shines. Trek across the globe, stopping off everywhere from the piranha-filled waters in Brazil's Pantanal wetlands to the shrinking habitat of the North American grizzly bear.

Tuesday, Dec. 6, 7:30pm

Ticket Information

Call 312.665.7400 or visit www.nationalgeographic.com/nglive to purchase tickets. A limited number will be available onsite the day of the event starting at 5:30pm, but we recommend reserving tickets in advance since this series sells out.

Series Subscriptions—On Sale Now

Explorers Circle Ensure the continuation of *NG Live!* Benefits include reserved seating, a private reception and signed book: $360; TFM, NG and Geographic Society of Chicago members $350.

Patron (reserved seating): $110; TFM, NG and Geographic Society of Chicago members $100.

General admission: $84; TFM, NG and Geographic Society of Chicago members $70; educators/students $48.

Individual Events—On Sale September 15

Patron (reserved seating): $30; TFM, NG and Geographic Society of Chicago members $28.

General admission: $24; TFM, NG and Geographic Society of Chicago members $22; educators/students $15.

Find beauty in nature and craftsmanship

COURTESY OF FRANS LANTING/WWW.LANTING.COM



Jungles

Through Jan. 1, 2006

Bold, large-scale color photographs by Frans Lanting capture the fragility and beauty of rainforests and their inhabitants.



Transforming Tradition: Pottery from Mata Ortiz

Through May 31, 2006

Witness the rebirth of a unique pottery tradition in the exquisite ceramics from the Mexican town of Mata Ortiz.

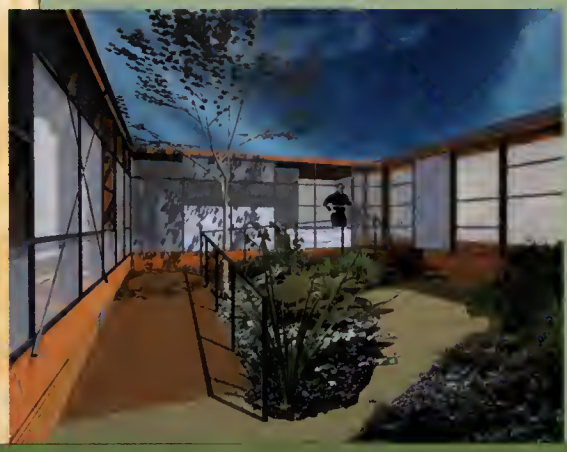
This exhibition was organized by The Field Museum.

Design Innovations in Manufactured Housing

Through Jan. 16, 2006

Original models and drawings by noted architects and industrial designers offer creative solutions for pre-fabricated homes.

This exhibition was developed by the City Design Center, College of Architecture and the Arts, University of Illinois at Chicago, in collaboration with The Field Museum. The City Design Center, College of Architecture and the Arts, University of Illinois at Chicago received funds from the National Endowment for the Arts and the Graham Foundation for Advanced Studies in the Fine Arts to create this exhibition.



"HOME OFF THE HIGHWAY" DESIGN TAYLOR & BURNS ARCHITECTS



MIKE SIOREK

Visitor Information



Getting Here: Field Museum visitors can park in Soldier Field's parking garage. Visit www.fieldmuseum.org for information on parking lots/rates, free trolleys and public transit.

Hours: 9am–5pm daily. Last admission at 4pm. Please note the Museum closes at 5pm even when an evening event is scheduled. Event participants will be asked to leave the building until 30 minutes before their event begins.

Admission and Tickets: Member passes can be reserved through the membership department (312.665.7705) or picked up at the membership services desk. For non-members, The Field Museum's gold pass, which includes general admission plus one special exhibition, ranges in price from $8 to $19, depending on your age category and whether you are a Chicago resident. Please bring your ID to receive the appropriate ticket price.

Tickets are available at the Museum's admission desks, or in advance via www.fieldmuseum.org or 866.FIELD.03. For all admission and ticket details, visit www.fieldmuseum.org.

Accessibility: Visitors using wheelchairs or strollers may be dropped off at the new east entrance. Handicapped parking and wheelchairs are available on a first-come, first-served basis. Call 312.665.7400 to check on the accessibility of programs that take place outside of the Museum.

The Field Museum salutes the people of Chicago for their long standing, generous support of the Museum through the Chicago Park District. In addition, Museum programs are partially supported by a Cultural Program 4 Grant from the City of Chicago Department of Cultural Affairs and the Illinois Arts Council, a state agency.

In accordance with Title IX of the Education Amendments Act of 1972, we do not discriminate on the basis of sex in our programs or activities. Should you have any questions or concerns, please contact our Title IX Coordinator in the human resources department, 312.665.7271.

Livin' Large in Pompeii



DIANE ALEXANDER WHITE GNA114174C 24357

Only the wealthiest Roman citizens could have possessed items such as this large wine jar, bronze bathtub and decorative wall frescos.

Lifestyles of the rich and famous. That term doesn't just apply to today's dot-com billionaires and Hollywood celebrities. The Field Museum's anthropology collections contain many artifacts from the Pompeii area that belonged to the highest stratum of the upper class, including a large bronze bathtub, two 450-pound ceramic jars, and many wall-sized frescos. At first glance, these items might not seem extravagant, but they would have been out of reach for the average Roman citizen.

The ceramic jars and bronze bathtub were found in Boscoreale, a suburb about one mile outside Pompeii, at what was once a prosperous working farm. The jars, used to hold locally made wine, were buried underground with only the openings above. The bathtub, with its lion's head adornments and lion-like feet, shows how animal motifs were used in decoration. While the jars serve as a symbol of Roman agricultural expertise, the bathtub illustrates that luxurious bathing was an important part of their "rich and famous" lifestyle. Roman frescos often depict deities and show architectural images to create the illusion of a grand building. Today's art lovers continue to prize these ancient paintings—four Pompeii frescos owned by The Field Museum are displayed at the Art Institute of Chicago.

The bronze bathtub and wine jars, as well as frescos similar to those held in The Field Museum's collections, will be featured in *Pompeii: Stories from an Eruption* (opening Oct. 22). Later, anthropologists will move the Museum's Pompeii artifacts into the new Collections Resource Center for safekeeping.

Ben Bronson, PhD, Field Museum anthropology curator, contributed information for this Scientist's Pick.

Rebuilding Science in Iraq, One Scientist at a Time

Reprinted with permission from the American Association for the Advancement of Science

Editor's note: The serene halls of The Field Museum and the war-torn streets of Baghdad seem worlds apart, but Alexander Dehgan, PhD, found that science skills honed here were surprisingly applicable during a recent, and often dangerous, job in Iraq. Thanks to a strong partnership between The Field Museum and the University of Chicago, Dr. Dehgan spent a seven-year residency at the Museum while he was a doctoral student pursuing a degree from the university's committee on evolutionary biology. A biogeographer, he worked closely with Bruce Patterson, PhD, The Field Museum's MacArthur curator of mammals, and specialized in studying extinction proclivity in lemurs in Madagascar.

Alexander Dehgan, PhD, (inset) was lucky to escape serious injury when this car bomb exploded near him. Letters sent by school children cheered him while he was in Iraq.



ALEXANDER DEHGAN

U.S. DEPARTMENT OF STATE

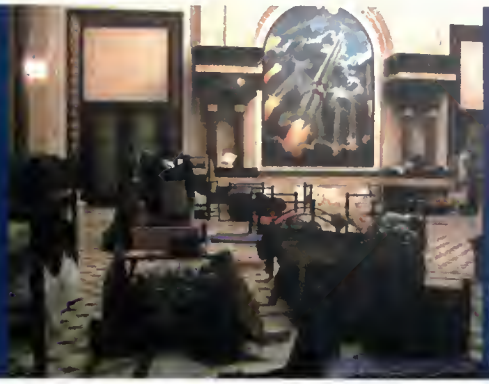
"Being able to work in an institution that works to record this planet's incredible biodiversity gives you the desire to go out and preserve it," said Dr. Dehgan, recalling his experience at the Museum. He described Dr. Patterson as his "advisor and inspiration."

After graduating, Dr. Dehgan spent five months in Iraq as an American Association for the Advancement of Science (AAAS) Diplomacy Fellow working with the Coalition Provisional Authority that governed Iraq after the war. "My work in Madagascar and in Iraq were not so different—in one case, I worked with devastated ecosystems in the middle of ecological collapse, and in the other, human societies devastated by politics and war. In both cases, the science and the people both are important parts of the equation," he explained.

Last year, AAAS Senior Writer Edward W. Lempinen interviewed Dr. Dehgan. He described Dr. Dehgan's role in Iraq as helping "find work for hundreds of former weapons scientists—not building more weapons, but rebuilding the country." The following is an excerpt from Lempinen's story:



After receiving his PhD, Dr. Alexander Dehgan (left) posed with his "adviser and inspiration," The Field Museum's Bruce Patterson, PhD, at the University of Chicago's commencement ceremony in June, 2003.



When Dr. Dehgan first arrived in Iraq, he and his colleagues slept for two weeks in Saddam Hussein's throne room until they found other accommodations.

Though well briefed, and though he's traveled to more than 60 countries worldwide, Dehgan didn't know exactly what to expect when he first landed in Iraq on 15 January [2004]. But the facts soon became clear: University laboratories were stripped. Collections at the Baghdad Natural History Museum had been looted or destroyed. A generation of science students was at risk of being lost. Hundreds of experienced weapons scientists were unemployed, but getting worrisome job offers from Iran and other nations.

His first visit lasted a couple of weeks; in February, he went back for a tour of service that lasted until 15 June [2004]. In that time, he and his colleagues worked to find Iraqi weapons scientists, engineers and technicians and bring them back to work in a constructive role. There were no typical days. They worked to cultivate relationships with the scientists and to bridge the various administrations and bureaucracies that were governing post-war Iraq. Some days they struggled just to find offices, furniture, transportation. There were also the risks of living in a war zone.

"What you do is take all the precautions to minimize risks you can control," Dehgan explained, "and you have to literally put aside fear of events you can't. You have to think like a scientist. The statistical chance of getting hit by a mortar or car bomb-the chances of that happening, those random risks, are pretty low. So you don't think about those things."

But Iraq as seen from thousands of miles away is in many ways different from the day-to-day reality of life there. A quiet, routine life goes on in much of Baghdad, he said, despite the struggles with electrical power and occasional bursts of violence. Similarly, many Americans wrongly believe that weapons scientists were uniformly and closely allied with Saddam. "One of the mistakes people have made with regard to the Baath Party," Dehgan explained, "was that they compare it to the Nazis, rather than... to the Communist Party, which I think is the more appropriate example. People joined the Baath Party for career advancement."

But even after the Baath Party fell, the old ways of coping in Saddam's system lingered and proved a challenge to Dehgan and his colleagues. "Under Saddam's system, if you had contact with foreigners, you were persecuted," he said. "And we had to overcome these barriers."

It's fair, Dehgan says, to wonder why the State Department would send a field biologist to get the program off the ground, rather than a Foreign Service officer or a military expert. "But actually it turned out really well," he said. "I think field biologists, particularly tropical field biologists, have certain qualities that were very applicable to Iraq. Working in a place like Madagascar, or South America, requires adaptability, creativity, an unhealthy desire, I would say, for complex challenges. An ability to deal with difficult conditions, isolation. And an ability to work with the local people, which I think is really necessary. And then I think there's a certain degree of bravado, courage and dementia—the Indiana Jones complex—that allows you to jump in a car and drive into a war zone to meet some scientists."

'...there's a certain degree of bravado, courage and dementia—the Indiana Jones complex—that allows you to jump in a car and drive into a war zone to meet some scientists.'

After returning from Iraq, Dr. Dehgan worked for the U.S. Department of State in Washington, D.C. as an AAAS Diplomacy Fellow until June, 2005. In that job, he worked closely with Iraqi scientists, traveled frequently to the region, and helped develop a web-based virtual science library for Iraq. In July, the U.S. Department of State gave Dr. Dehgan a Superior Honor Award in recognition of his contributions. Dr. Dehgan plans to collaborate with Dr. Patterson and other Field Museum colleagues in the future as he works in the fields of conservation and science policy.

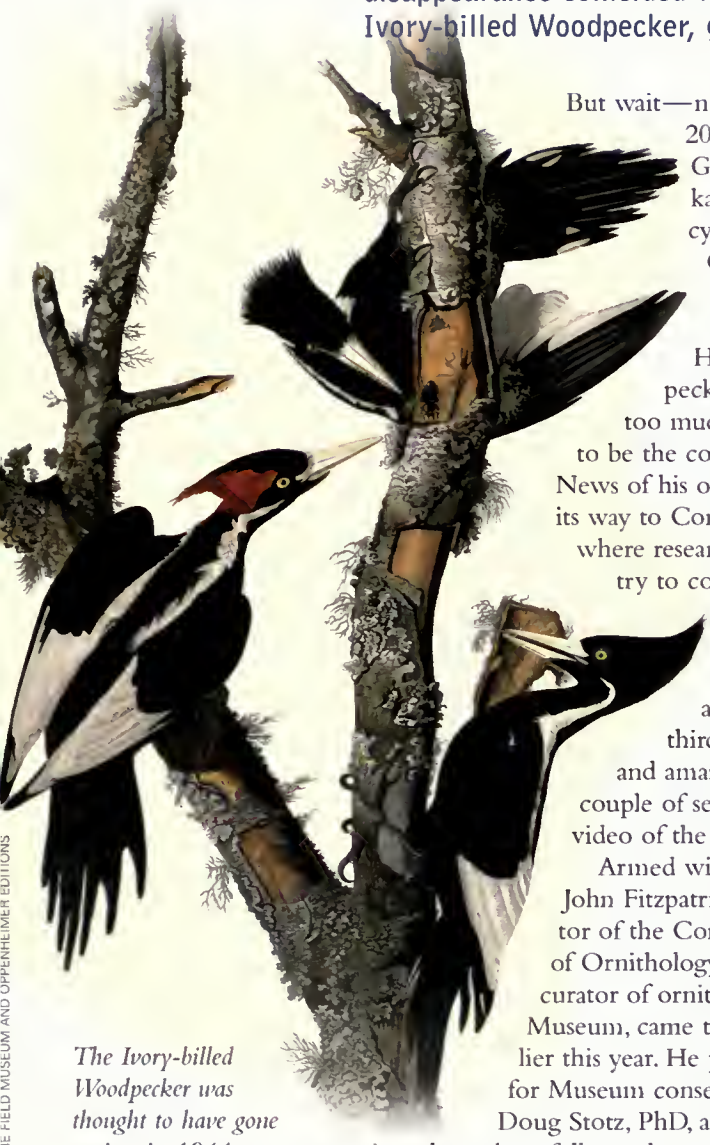
To read Edward W. Lempinen's entire article, visit the website www.aaas.org/news/releases/2004/0907deghan.shtml

To contact Dr. Alexander Dehgan, write to adehgan@fieldmuseum.org

The Search for the Ivory-billed Woodpecker

David Willard, PhD, Collections Manager, Field Museum Division of Birds

The litany of North American bird extinctions: Great Auk, gone 1844—too good a source of protein for 19th century Atlantic mariners to pass up; Labrador Duck, gone 1866—the last known individual shot by a hunter; Passenger Pigeon, gone 1914—a resource so abundant, it was inconceivable that it could disappear; Carolina Parakeet, gone 1914—its habit of eating crops meant that even its beauty could not save it; Bachman's Warbler, last confirmed sighting 1961—we can only speculate that its disappearance coincided with the drainage and clearing of southern bottomlands; Ivory-billed Woodpecker, gone 1944—its last known breeding site in Louisiana...



The Ivory-billed Woodpecker was thought to have gone extinct in 1944.

THE FIELD MUSEUM AND OPPENHEIMER EDITIONS

But wait—not so fast! Early in 2004, a man named Gene Sparling was kayaking in the cypress swamps of the Cache River basin near his home in east-central Arkansas. He spotted a woodpecker too large, with too much white in its wings to be the common Pileated. News of his observation made its way to Cornell University where researchers mobilized to try to confirm the sighting. The first to follow in Sparling's wake saw the bird again, and later, a third group spotted it and amazingly, picked up a couple of seconds of ghost-like video of the bird.

Armed with this video, John Fitzpatrick, PhD, director of the Cornell Laboratory of Ornithology and formerly a curator of ornithology at The Field Museum, came to Chicago earlier this year. He played the footage for Museum conservation ecologist Doug Stotz, PhD, and me. The first time through, at full speed, we were hard pressed to say the motion in it was even a bird. But when John slowed down the video, we began to understand why he was excited. The bird started from an upright perch on a tree trunk and flew away from the camera. When perched, we could see the lower part of the back looked pure white. As it flew away, we could see patterns of white both above and below the wings in places that it shouldn't be if it were a Pileated Woodpecker. We viewed the film over and over. Doug and I were finally convinced we were looking at an Ivory-bill.

John invited us to join the team to try to get more confirmed sightings. I drove down for two weeks in late March and Doug visited for a week in early April. Each day we started before dawn and stayed out until it was too dark to see. Sometimes we sat in one place with decoys nailed to trees and played recordings of Ivory-bill vocalizations in hope that we would draw the bird in. Other days we canoed through aisles of open water under a spectacular cathedral of arching cypress trees and water tupelo. Always, there was the anticipation that the bird might be around the next bend. It was thrilling to realize that we were sharing the air with this almost mythical woodpecker. During the time we were there, spring migrant birds began to arrive; countering this were innumerable water moccasins coming out of hibernation. Neither of us ever saw the Ivory-bill (there were only seven sightings over the year), but we both felt privileged to be part of the effort.

> 'Always, there was the anticipation that the bird might be around the next bend.'

It will be interesting to follow what comes next. If these birds live about15 years, there must have been four to five generations between the sighting in the 1940s and now. So there must have been a breeding population somewhere that produced the bird that was seen in the Cache River bottomlands. It is hard to imagine that this individual is truly the last. The cypress swamps that were decimated in the early 20th century have regenerated in magnificent fashion, so there is now far more appropriate habitat for this bird than there was when it "disappeared." If we can curb our appetite for cypress timber, it is just possible that the Ivory-billed Woodpecker, which almost everyone thought was gone for good, will return. ITF

Common Ground Serves Science and Society

Nancy O'Shea, Editor and Amy E. Cranch, Former Editor

Imagine if every household and business in Chicago had its own neighborhood telephone book, but there was no comprehensive directory or dial-up directory assistance for the entire city. An attorney in Hyde Park would have difficulty calling an accountant in Bucktown, and a parent in Little Village could not easily reach a pediatrician in Lakeview. A phone book is a simple example of a database. If a database is narrow and difficult to access, it limits opportunities for us to connect and share information.

Recently, The Field Museum faced the mind-boggling challenge of standardizing and connecting over *70 different* databases—invaluable storehouses of information about the Museum's 22 million objects and specimens. Why so many databases? The Museum has a history of supporting the research interests of each individual scientist. Over the years, scientists kept information in individual databases using a variety of disparate technologies. Today, the system of separate databases has become unwieldy and time-consuming to use. It hampers scientists and conservation specialists who need quick access to data and seek easy collaboration with colleagues around the globe in order to study and preserve species and cultures—work of increasing urgency.



DIANE ALEXANDER WHITE

Botany Collections Manager Christine Niezgoda (left) worked with Joanna McCaffrey on transferring botany databases to the Common Ground system.

In response to this problem, The Field Museum has begun the process of transferring all science databases to a single system called Common Ground. This massive initiative will allow researchers to cross-reference multiple specimens and objects across academic disciplines, as well as connect to our library and other archives, greatly increasing the Museum's capacity to generate new information and analyses. The results will be far reaching and will enhance exhibition content, education programs, printed materials and other media. Common Ground will be available to anyone with internet access. Ultimately, it will integrate with other large worldwide natural history and conservation organization websites.

"Making Common Ground a strategic initiative was the effort of both the science and technology teams. Their work over several years will result in placing our scientists on the leading edge of data stewardship and give our vast collections a well-deserved public window," explained Joanna McCaffrey, The Field Museum's collections database architect.

Through competitive review, the Museum unanimously chose KE EMu software, also used by other leading museums. The botany department was the first to pilot Common Ground, uniting more than 20 databases from four different technologies. Data from 330,000 botany specimens and over 110,000 plant and fungal taxa are now available on the Museum's KE EMu website and can be freely accessed by researchers across the globe. Thus, information on one of the largest and most important herbarium collections in the world is just one click away.

The Museum is now transferring data on the fishes collections to Common Ground. Next are anthropology, media archives, insects, and invertebrate zoology collections. More than one million specimens and objects and their associated records will become available to the public following this first critical phase. Additional funding is essential to continue converting all items in our collections to the Common Ground system.

'[Common Ground]....will result in placing our scientists on the cutting edge of data stewardship...'

To see how Common Ground united the Museum's botany databases, visit http://emuweb.fieldmuseum.org/botany/Query.php

Technology Rescues a Long-Silent Voice

Nancy O'Shea, Editor

"Mr. Holmes' party went up the river in their launch to obtain fresh water when they were surprised by a party of bushmen fully armed and apparently on a raiding expedition...Mr. Holmes went close to the natives in a small boat while being covered by the guns in the launch...[he] obtained this belt from one of them, it being the only thing the man had on." ***—Captain A.W.F. Fuller, taken from a recording made in 1958.***

Left: John Maniatis, working in the Museum's Regenstein Conservation Laboratory, examines the belt that Fuller mentioned in the quote at the opening of this story.

The Field Museum has dusted off a treasure trove of more than 100 hours of audio recordings made almost half a century ago and is converting them into today's digital format. Roland Force, PhD, then curator of The Field Museum's Pacific collections, made the recordings in 1958 when he sat down with Captain A.W.F. Fuller to document Fuller's extraordinary 60-year career spent gathering ethnographic and anthropological artifacts from Oceania—artifacts he purchased from scholars and travelers. On these remarkable recordings, Fuller, who died in 1961, describes masks, skulls, weapons, tools, idols, boomerangs and other significant pieces of the collection comprised of about 6,000 objects. The Field Museum purchased Fuller's collection in 1958 after The British Museum turned down the opportunity to acquire it. Overnight, The Field Museum's Pacific collection, already one of the best in the world, gained strength with the addition of important artifacts from Polynesia and Micronesia.

The technology used to record the Fuller interview was considered state-of-the-art in the mid-20th century, but it has been obsolete since the '70s. Fortunately, The Field Museum kept two of the Walkie RecordAll machines used for the recording sessions. The Museum loaned these semi-functioning devices to the Cutting Corporation, an audio production facility in Maryland hired to convert the old tapes, called sonobands, into digital format. It was amazing that after examining the Museum's old machines, the Cutting Corporation's sound preservationists found a rare Walkie RecordAll for sale. They purchased it, made some repairs, and were able to begin saving the Museum's recordings. Sonobands can become damaged in a variety of ways over time and that made the job difficult. But creative engineers finally rescued Fuller's voice from being trapped forever on the old tapes. The Museum's Regenstein Endowment supported this project.

"We are using 21st century technology to salvage recordings made in the 20th century about artifacts created and collected in the 17th, 18th and 19th centuries," said John Maniatis, Field Museum anthropology collections assistant and principal investigator on this project.

Today, some objects from Fuller's collection are on permanent display in The Field Museum's Pacific Hall. The rest are preserved in climate-controlled storerooms or occasionally loaned to scholars around the world for study.

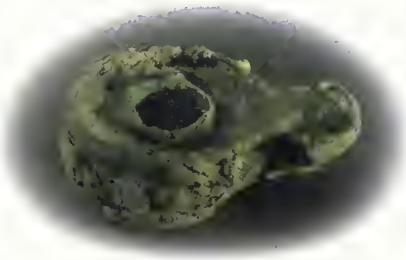
To learn more about The Field Museum's Pacific collections, go to www.fieldmuseum.org/research_collections/anthropology/collections_pacific.htm



Right: In 1958, The Field Museum made tape recordings of Captain A.W.F. Fuller. This archival photo shows him examining items in the Museum's Pacific collections.

Annual Fund Donor Appreciation Date Change

The Annual Fund Donor Appreciation Night has been changed to Wednesday Oct. 19, in order to provide all Annual Fund donors the opportunity to attend an exclusive preview of *Pompeii: Stories From an Eruption*. You will not want to miss this exciting exhibition. This will also be the perfect time to bring the whole family to enjoy *Dinosaur Dynasty: Discoveries from China*. For more information on The Annual Fund, call 312.665.7777 or email annualfund@fieldmuseum.org.



© MINISTERO PER I BENI E LE ATTIVITÀ CULTURALI— SOPRINTENDENZA ARCHEOLOGICA DI POMPEI

This bronze lamp will be on display in Pompeii, *along with 450 other artifacts.*

Founders' Council Looks Forward to a Fun-Filled Autumn

This fall, the *Founders' Frontiers* series of programs continues with two outstanding offerings. On Sept. 7, John Bates, PhD, zoology department chair, Shannon Hackett, PhD, curator, and Kevin Feldheim, PhD, laboratory manager, will treat our guests to an up-close encounter with shark DNA as we tour the Pritzker Laboratory. The program will be hosted by Steering Committee members Gail and Bob Loveman.

On Sept. 27, we will shift from sharks to textiles as Gary Feinman, PhD, anthropology department chair, and Linda Nicholas, adjunct curator, give us some insights into the material artifacts of Mexico's Oaxacan culture. Our hosts for the program will be Steering Committee members Donna and Peter Freeman.

In October, mark your calendars for two big evenings. On Oct. 18, Founders' Council members will preview *Pompeii: Stories From an Eruption*, and on Oct. 28, Walter Alvarez, PhD, world-renowned geologist and paleontologist, will be presented with the 2005 Award of Merit.

For more information on joining The Founders' Council, please call Monica Cawvey at 312.665.7773.

Children's Holiday Celebration

Catch the holiday spirit at The Field Museum on Thursday, Dec. 8, when The Women's Board hosts its annual Children's Holiday Celebration from 4–6:30pm. Children and adults are invited to explore and celebrate the many cultures of Chicago and the world at this festive event. Sing along to holiday favorites performed by the Stu Hirsh Orchestra, marvel at the gravity-defying Jesse White Tumblers, and enjoy the grace of the Ballet Chicago Studio Company. Crafts and entertainment from around the world and a visit with Santa Claus will create a memorable afternoon.

Reservations are limited and tickets will not be sold at the door. For tickets or further information, please call 312.665.7145.

Museum Store Offers Discount Days

Mark your calendars now for the annual Museum Stores Members' Discount Days, which run from Monday, Nov. 28 through Sunday, Dec. 4 this year. Members will receive 20 percent off all purchases in the Museum stores daily from 10am–5pm.



STEVE RATHBONE

The main store currently features a wide selection of Mata Ortiz pottery in conjunction with the Webber Gallery exhibition, *Transforming Tradition: The Pottery of Mata Ortiz*. This is a rare opportunity for Museum guests to purchase one-of-a-kind pieces crafted by some of the same artists whose work is featured in the exhibition.

Look for a beautiful assortment of Italian-inspired home, garden and personal accessories when the *Pompeii* exhibition store opens in late October. Guests will be able to choose from a wide variety of items, including glass vases from Donna Karan Living® which are reminiscent of the sea.

Beautiful pots from Mata Oritz are available in the Museum store.

Special Membership News



These casts of fugitives on a staircase illustrate why Pompeii has been called "The City of the Dead."

Private Member Viewings of Pompeii: Stories from an Eruption

Special members-only viewings for *Pompeii: Stories from an Eruption* are scheduled for Thursday, Oct. 20, 9am–10pm; Sunday, Oct. 23, 5pm–10pm; and Monday, Oct. 24, 5pm–10pm. An invitation and ticket request form will arrive by mail in early October. Tickets used during the member viewing events will be subtracted from the total allocation of tickets you may obtain during the exhibition.

For public-hour viewing, family members may receive up to four free tickets; individual, senior and national affiliate members, two tickets; and student members, one ticket. Obtain public-hour tickets by calling the member ticket hotline at 312.665.7705; or visit www.fieldmuseum.org and from the membership page, choose "ticket request;" or stop by the member services desk.

Don't Miss These Early Opportunities to Obtain Tickets for King Tut

Attend the member viewing events for *Pompeii* and take advantage of a special early opportunity to obtain tickets for *Tutankhamun and the Golden Age of the Pharaohs*, which opens May 26, 2006 and continues through Jan. 1, 2007. This opportunity is available ONLY to members who visit The Field Museum to attend the *Pompeii* member viewings (dates and times above).

Members who do not obtain *Tutankhamun* tickets during the Pompeii members' viewings may obtain tickets starting Tuesday, Dec. 13—five weeks before they go on sale to the general public.

Tutankhamun tickets are $10 each (a 33 percent discount off the public price.) Family members may obtain four tickets at the discounted price; individual, senior and national affiliate members, two tickets; and student members, one ticket. Members may also purchase additional *Tutankhamun* tickets at the public rate of $15 each (tickets do not include basic Museum admission.) Tickets may be obtained by calling 312.665.7705; or visit www.fieldmuseum.org and from the membership page, choose "ticket request;" or stop by the membership services desk.

For general membership information, call 312.665.7700.

Rebuilding Your Museum will resume in the next issue of In the Field.



A gold and inlaid canopic coffinette from King Tut's tomb is featured in the exhibition.